RELIGION AND SCIENCE EMBRACED: HOW A RELIGION ACTIVELY TEACHES AND UTILIZES ALTERNATIVE RELIGIOUS AND SCIENTIFIC KNOWLEDGE WITHOUT CONFLICTING INTERPRETATIONS ARISING

by

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B. A. Hons., University of Saskatchewan 2007

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

In the

College of Arts and Sciences, Department of Sociology

UNIVERSITY OF SASKATCHEWAN

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ABSTRACT

Religious fundamentalism is a confusing and not well understood phenomenon in present day Western societies. In order to obtain fresh insights into what social forces and conditions affect religious organizational development such that they become fundamentalist organizations, this study seeks to analyze a religious group that historically has been mandated to integrate and utilize alternative scientific and/or religious knowledge into their canon of teachings. A triangulation study consisting of a content analysis of its accepted history and a discourse analysis of its accredited membership are utilized to gather data on this religious organization to understand the historical, organizational, and external social circumstances that have allowed this religious community to engage and interact with alternative scientific and/or religious knowledge without interpretations of conflict becoming a source of social strife within their organization.

Keywords: paradigm, exemplar, disciplinary matrix, legitimate authority, charisma, traditional, rational-legal, typology, exclusive realism

Subject Terms: religion, science, fundamentalism

DEDICATION

This thesis is dedicated to my family. Their belief and support is the guiding light in my world.

ACKNOWLEDGEMENTS

I would like to acknowledge the assistance and support of my committee members, especially my supervisor Terry Wotherspoon, as well as the many sociology professors at the University of Saskatchewan. They have all helped to shape and temper me as a sociologist.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION

> Secularization may be occurring in parts of Europe, but they are the exception not the rule. Most of the world remains deeply religious (Watts, 2006: 57).

> [Fundamentalism] is now an essential part of the modern scene and will certainly play an important role in the domestic and international affairs of the future. It is crucial, therefore, that we try to understand what this type of religiosity means, how and for what reasons it has developed, what it can tell us about our culture, and how best we should deal with it (Armstrong, 2000: xii).

Over the years many differing theoretical perspectives have been utilized in order to interpret how scientific and religious ways of understanding reality relate to each other. The continuing civil strife and academic writing conceiving this issue demonstrates just how important and contentious a subject it currently is. The present literature in this area represents a myriad of differing interpretations of scientific and/or religious interactions that can be roughly categorized into compatible, incompatible, incommensurable, integrationist, and conflicting interpretations (Barbour, 2000: 2-4; Scott, (1999) 2003: 113). The core issue to be addressed here is the interpretation of incompatibility which, when combined with certain ontological assumptions or other social circumstances, can lead to an interpretation of conflict that is acted upon by both individuals and groups. This area that is a hotly debated and often discussed type of interpretation which demands attention and presently requires a theoretical structure by which to explain and predict how and under what conditions interpretations of conflict between science and religion or between differing religions occur.

The social strife that can result in social arenas where alternative scientific and/or religious understandings and practices are compared and contrasted is due to

discrepancies between individual and group interpretations of the subject matter being

discussed. While many theorists in the disciplines of philosophy, theology, religious

studies, and both the natural and social sciences attempt to understand this civil strife

by way of creating and applying a myriad of differing theoretical frameworks to interpret

these social interactions; these types of theories can only be validated as inferences to

the best explanation within their own theoretical framework. Consequently, the present

literature in this area is simply a large morass of competing theoretical frameworks. The

discipline of sociology can contribute greatly to this subject matter. Instead of simply

creating and applying a wide variety of theoretical frameworks in the hope that people

will adopt them to interpret these types of social interactions, a possible sociological

approach would be to actually search for social arenas where alternative scientific

and/or religious understandings are both taught and utilized without interpretations of

conflict arising.

One of the most potentially fruitful starting points by which to discover a means

by which social groups, communities, and institutions could utilize several differing

scientific and religious ways of understanding without social strife developing due to

conflicting interpretations, would be to find already existing social arenas where these

types of social groupings actually do have the capacity to teach and utilize alternative

scientific and religious forms of understanding.   Toward this end, this study focuses

upon a religious and philosophical organization known as the Saskatoon Centre for

Spiritual Living. Saskatoon's Centre is a local chapter of a worldwide organization

known as The International Centres for Spiritual Living (ICSL). The ICSL is very unique

in that, right from its original formation in 1927, it has often invited experts from the

sciences and the social sciences, as well as other religious bodies, to speak with and teach classes at their institutions and local chapters. The members of this institution have also made continual attempts to integrate more scientific and religious teachings into their own classes and education system (Braden, 1987: 294, 296; Holmes, 1970: 188). It is this attempt at recognizing points of compatibility and/or integrating alternative knowledge-systems with their own that appears to differentiate this social institution from many others.

To develop a theoretical framework to engage and interpret the social relationships, organizational factors, and historical circumstances involved when studying group interpretations of scientific and religious relations, a Kuhnian paradigmatic epistemology was utilized in concert with Max Weber's ideal types of legitimate authority. This composite theoretical framework allows for informative engagement regarding, not only the paradigmatic systems of understanding and interpretation which the observed social groupings and organizations utilize, it also takes into account authoritative paradigmatic interpretations, modifications, and even paradigmatic revolutions as well. This is very important since shared paradigmatic frameworks are the definite product of groups and/or organizations of people who are loyal to particular types of authoritative structuring, else there would be little or no coherence regarding the interpretations, practices, and understanding of the people sharing the same knowledge-frameworks. These reasons, coupled with its ability to actually utilize the ambiguous coherency of both science and religion as categories of social understandings and knowledge production, makes this theoretical framework valuable and novel in this area of research.

To increase the amount of data gathered, while also engaging the paradigmatic framework and authoritative structuring of Saskatoon's Centre in several differing ways, I employ a triangulation methodology. This includes first a content analysis, to determine the historical social circumstances surrounding the creation and development of this institution, as well as its traditional teachings, and the authoritative structuring of the institution. A discourse analysis is also utilized to determine how the institution, its teachings, and the authoritative structuring of the institution exist and are interacted with today. Lastly, I employ a participatory validation of the results in order to determine whether or not the subjects in the study agree with the researcher's interpretation of their social institution, its teachings, and its history.

These theoretical and methodological models are employed in order to answer the research question: what historical social circumstance(s), institutional mechanism(s), and paradigmatic framework(s) allow certain religious organizations to teach and utilize both scientific and religious understandings without interpretations of conflict becoming a contentious issue?

1.1 Compatible, Incompatible, Incommensurable, Integrationist, or Conflicting?

Many experts on the interaction of science and religion have created typologies in order to interpret differing kinds of interactions between these two types of knowing and understanding reality. While many of these typologies differ, there are many points common across them. For example, Ian Barbour, an influential scholar on the interaction between science and religion, utilizes four general types: conflict, independence, dialogue and integration. However, Barbour points out that there is no clear distinction between dialogue and integration in his typology (Barbour, 2000: 83).

His typology matches well with John Haught's four-fold typology, where conflict and contrast match with Barbour's conflict and independence, and his contact and confirmation categories roughly match Barbour's dialogue/integration types. (Barbour, 2000: 4). Another expert, Eugenie C. Scott, uses a four-fold typology that exactly matches Barbour's but utilizes the terms "warfare" for conflict, "separate realms" for independence, and "accommodation/engagement" for dialogue/integration (Scott, (1999) 2003: 113).

This thesis employs a meta-typology consisting of five distinct types of interactions. The compatibility type will represent an interpretation made by religious and/or scientific groups where their understandings can logically coincide with one another. The incompatibility type will represent the interpretation of two or more knowledge systems contradicting one another, and a consequent inability for them to relate well with each other. The incommensurability type will represent an interpretation where two or more knowledge systems are so different that they cannot be logically compared due to a complete lack of logical points of contact between them. The integrationist type represents a situation where knowledge systems are interpreted as being interrelated historically or where a new metaphysic is introduced to interpret two seemingly incompatible or incommensurable knowledge systems as interrelated, with interrelated meaning as part of a larger knowledge system or form of understanding. Lastly, the conflict interpretation represents an interpretation whereby religious and/or scientific individuals and/or groups engage in fundamentalist behaviour and openly attack other differing knowledge systems or forms of understanding.

This typology provides a useful starting point to make sense of the myriad of different interactions that can be presently observed between scientifically and religiously minded individuals and/or groups. At present, identifying necessary reasons for selecting any of these types of interactions when relating scientific or religious ways of knowing is a seemingly impossible task because the categories of both science and religion have "hazy categories with blurry boundaries" (Dixon, 2008: 15). It is obviously very difficult to explain what something is not without being able to accurately define what exactly it is beforehand. Metaphysical models that are created in order to develop integrationist interpretations between science and religion are widely varied and often problematic due to how the products of these integrations are often interpreted as being in conflict with accepted scientific and religious understandings (Branch & Scott, 2009: 92-99; Dixon, 2008: 81-83, 87-103; Scott, 2004: 58-65).

Over the last several hundred years, an interpretation of conflict has existed between religious and scientific forms of knowledge and knowledge creation in Western countries (Dixon, 2008: 1-2, 81-103; Scott, 2004: 1, 57; Tyson, (1999) 2003: 74). Although the other types of interactions of compatibility, incompatibility, incommensurability, and integration can be demonstrated as presently existing and contributing to the discourse concerning how scientific and religious modes of investigating and interpreting reality presently relate with one another (Barbour, 2000: 7-38; Consolmagno, 2008: 11; Consolmagno, 2008: 28-29; Gingerich, 2006: 101; Miller, 1999: 250-252; Scott, 2004: 57-65); it is the interpretations of conflict that are particularly troubling for Western countries, both for religious and scientifically oriented

individuals and groups due to the civil strife that often results in conjunction with such an interpretation (Branch & Scott, 2009: 92-99; Dixon, 2008: 81-103).

While many interpretations of conflict have often been challenged as time passes (Barbour, 2000: 10; Dixon, 2008: 18, 76; Lennox, 2007: 109-113), they are still very prevalent within Western societies (Scott, 2004: 1). Mainly within the United States, but also around the world, there are increasingly more examples of conflicting interpretations concerning the interactions of scientific and religious knowledge that have manifested themselves in the form of court cases, lectures, debates, books, articles, movies, political decision-making, etc. (Branch & Scott, 2009: 92-99; Consolmagno, 2008: 28; National Academy of Sciences & Institute of Medicine, 2008: 49). Barbour traces the roots of the present pervasive conflicting interpretation between religion and science to J. W. Draper and A. D. White, stating that:

> The Conflict thesis was promoted late in the nineteenth century by two influential books, J. W. Draper's 'History of the Conflict between Religion and Science' and A. D. White's 'A History of the Warfare of Science with Theology in Christendom.' Recent historians point out that the evidence they cited was highly selective and that alternative views of the relation between science and religion were widely held during the centuries these authors describe (Barbour, 2000: 10).

According to the philosopher and historian of science, Thomas Kuhn, these differing types of interpretations regarding the interactions between different knowledge-systems are due to what he refers to as an "incompleteness of logical contact" (Kuhn, 1970: 110). By this he means that, if scientific and religious ways of understanding reality were well articulated and/or rule-based then points of logical contact, or a lack thereof, between the two would be more easily determined and conclusions of compatibility, incompatibility, incommensurability, integration, or conflict between them

could necessarily occur. Such conclusions, however, are not necessarily applicable to the interactions between differing scientific and/or religious understandings as they have been interpreted in the past or as they exist presently due to the lack of clear and concise boundaries between them.

It is due to this lack of unifying and thereby differentiating or integrating indicators within both scientific and religious contexts that a significant amount of the interactions discussed between science and religion or between differing religions within the available literature has involved theoretical breakdowns which encourage interpretations of compatibility and/or attempts at integration. Clear and concise boundaries or rules must be articulated in a particular scientific or religious form of understanding before any particular type of relation between those two forms can be determined. This situation does exist with some specific scientific disciplines and religious groups that are this well articulated in terms of their beliefs and disciplinary boundaries (Miller, 2006: 193; Ruthven, 2007: 4). As a whole, however, disciplines that are recognized as being scientific and religious need not have anything in common (Harrison, 2006: 147; Shapin, 2007: 12).

Even if specific communities or groups of scientific or religiously oriented individuals can present a researcher with the points of logical contact necessary to determine a rational conclusion of a particular type, this would not be a possible means by which interpretations of conflict could be addressed. While allowing for a much more clear and concise relation between differing types of understandings, a study only involving points of logical contact between disciplinary or institutional lines could only explain interpretations of incompatibility, not the conflicting interpretations that can occur

due to that incompatibility. This is because the interpretation of incompatibility between scientific and/or religious understandings is a necessary but not a sufficient criterion for a determination of conflict between differing types of understandings; there are more criteria necessary for interpretations of conflict between differing understandings to occur.

Another reason as to why comparisons between all differing scientific and religious understandings is a poor means by which to address this present issue of civil strife is due to the enormity of the task itself. Ken Miller, a biologist at Brown University, echoes these conclusions by stating that, "if our goal is to analyze in fine detail the precise fit between evolutionary biology and each and every shade of religious belief, we might as well give up now" (Miller, 1999: 222). Such an undertaking would not only prove to be exceedingly difficult but would not address the underlying social issues regarding the metamorphosis from an interpretation of incompatibility to an interpretation of conflict.

Conclusions of incompatibility are not just limited to already existing scientific and religious understandings, they are also the result of completely new theoretical and theological frameworks that are ironically being created in order to deal with present-day conflicting interpretations. Due to how potential points of logical contact between scientific and religious knowledge are dependent upon the particular adopted theoretical perspective of the individual(s) and/or group(s) doing the interpreting; an extremely large body of literature presently exists that involves utilizing the integrationist approach to create entirely new theoretical constructs that are often interpreted as being incompatible and often in conflict with accepted scientific theories.

The two extremes of fundamentalist groupings that are represented in the civil strife that presently exists in nations like the United States and U.K. represent the metaphysical assumptions of "scientific materialism" and "biblical literalism" (Barbour, 2000: 11). As Eugenie Scott, the executive director of the National Centre for Science Education in the United States explains, these two metaphysical assumptions can be combined in different ways depending upon how they are interpreted. Scott utilizes eight different general categories of integration, along with several sub-categories, to describe how differing religious and secular groups are presently interpreting scientific data in the United States (Scott, 2004: 57-65). She then concludes that the conflicting knowledge-systems represented in the present creationist/evolution controversy is actually more representative of a continuum than a dichotomy, reflecting the extent to which individuals or groups attempt to integrate Biblical teachings with the materialist explanations of the sciences (ibid: 57).

> Many people are under the impression that there is a dichotomy between evolution and Christianity, a line in the sand between two incompatible belief systems. People with this belief feel that a person must choose one side of the line or the other. In reality, Christians hold many views about evolution, and Christian views actually range along a continuum, rather than being separated into a dichotomy (Scott, 2004: 57).

1.2 Problems with Arguments of Ontological Supremacy

> If we're absolutely sure that our beliefs are right, and those of others wrong; that we are motivated by good, and others by evil; that the King of the Universe speaks to us and not to adherents of very different faiths; that it is wicked to challenge conventional doctrines or to ask searching questions; that our main job is to believe and obey – then the witch mania will recur in its variations down to the time of the last man (Sagan, 1996: 413).

The most specious interpretations of conflict reflect assumptions of the ontological supremacy of certain knowledge-systems over others. The question of which metaphysical assumptions are correct and which are fallacious assumes a realist perspective and, consequently, does not appear to be a useful line of inquiry. To adopt a realist perspective is to understand certain knowledge systems as being representative of a reality existing independently of the interpretations of individuals or social groups (Dixon, 2008: 32-33). This interpretation, which is often the root cause of conflict between differing groups utilizing differing knowledge-systems, is premised upon two metaphysical assumptions; first, that that there exists a one-to-one relationship between a particular knowledge-system and reality, and therefore, that this knowledge-system has an ontological primacy, or represents a "paramount reality," superseding other knowledge-systems (Berger & Luckmann, 1966: 25). Secondly, there must be an assumption that reality can only exist in one way. Whenever religious and/or scientific understandings are compared, if at least one of the perspectives utilizes these two assumptions, it would be rare that an interpretation of conflict would not occur. These two problematic assumptions appear to lie at the heart of all present-day scientific disciplines (Preston, 2008: 36, 45).

The metaphysical assumption of realism, however, does not appear to interpret well the myriad of different and often incompatible or incommensurable forms of knowledge that exist within the knowledge systems categorized as either scientific or religious (Dixon, 2008: 48; Harrison, 2006: 147; Preston, 2008: 38). Any analysis of how individuals and groups, representing particular types of scientific or religious understandings, arrive at interpretations of conflict, while necessarily premised upon the

validity of the ontological framework utilized, need not be dependent upon realist assumptions since there is presently no way to demonstrate apodictic certainty utilizing any particular knowledge system. Even the scientific knowledge-systems that are continually tested with stringent forms of experimentation are always found wanting (Preston, 2008: 49).

Realist assumptions must be adopted a priori to any comparison between knowledge-systems thereby causing a necessary interpretation of incompatibility or conflict. This is due to how the valid forms of knowledge from any perspective, scientific or religious, necessarily must rest upon frameworks involving metaphysical assumptions and beliefs that cannot themselves be tested for or proven (Dixon, 2008: 19; Kuhn, 1970: 16-17; McCarthy, 1996: 18; Nielson, 1990: 3; Parsons, 1991: 1viiii; Preston, 2008: 99). Even empiricism does not provide a sceptical position due to how theoretical assumptions structure our sensory experience. As John Lennox, a mathematician, philosopher of science, and theologian, explains, "we cannot take a temperature without having an underlying theory of heat" (Lennox, 2007: 112). Therefore, the best indicator of potentially conflicting worldviews between social communities and/or groups is the existence of the two realist assumptions existing within one of these forms of knowledge-systems.

There are, however, many reasons why all knowledge-systems cannot be logically compared with one another in a strictly realist interpretation. This is because the knowledge-systems being interpreted do not necessarily share similar metaphysical assumptions, language, and/or levels of analysis; a situation that would make them incommensurable instead of simply compatible or incompatible. In order for knowledge-

systems to be directly comparable, they must make very similar metaphysical

assumptions concerning reality so that there are actually points of logical contact

between them, i.e. the same objects, events, or interactions can be recognized as

existing in a similar fashion. They must also utilize similar language so that the

knowledge being presented can be conveyed and compared accurately, and they must

involve similar levels of analysis so that the logic that is utilized in reference to particular

objects, events, or interactions are of the same type (Barbour, 2000: 19-20, 25, 52, 77,

162-163, 171; Haught, 2006: 74; Kuhn, 1970: 16-17, 103, 111, 149). For Barbour and

Kuhn respectively,

> models should be called complementary only if they refer to the same
> entity and are of the same logical type...These conditions do not apply to
> science and religion, which are practiced in differing situations and serve
> differing functions in human life (Barbour, 2000: 77).

> No natural history can be interpreted in the absence of at least some
> implicit body of intertwined theoretical and methodological belief that
> permits selection, evaluation, and criticism. If that body of belief is not
> already implicit in the collection of facts – in which case more than 'mere
> facts' are at hand – it must be externally supplied, perhaps by a current
> metaphysic, by another science, or by personal and historical accident
> (Kuhn, 1970: 16-17).

There is also a fundamental problem with the assumption that the use-value of

any particular knowledge-system necessarily equates to the truth-value for that system

as well. Critical historians of science have displaced the myth that 'if it's useful then it

must be true.' As the historian of science, Sajay Samuel, explains, "you can have a

perfectly false theory regarding what the world is, and it's useful. You can get things

done. This unquestioned justification – why is something true? Because it works. Why

does it work? Because it's true – can be easily falsified" (Samuel, 2009: 212). To

illustrate his point, he gives the examples of the prediction of radio waves utilizing

Maxwell's theory of ether in 1880, and the past and present use of geocentric

astronomy by navigators; both theories have been very useful in the past and even

presently, but both are presently understood to be "utterly false" (ibid). This

understanding has led many scholars in the study of science and religion to carefully

differentiate epistemological and ontological questions in their work, occasionally

dismissing questions concerning ontology altogether (Dixon, 2008: 34; Ellis, 2006: 20-

21; Wuthnow, 1994: 2-3). There also appears to be an increasing recognition that both

scientifically and religiously minded individuals and groups make particular

metaphysical leaps of faith in the creation of their knowledge (Ellis, 2006: 18-19; Kuhn,

1970: 158; Maxwell, 2009: 367; Medawar, 1984: 14; Miller, 1999: 27). Robert

Wuthnow, an expert in the sociology of religion, explains the practical consequences of

these types of consequences in the studies of religious activities:

> The sacred may now be regarded as a form of culture deeply conditioned
> by the language and the social context in which it appears, but the
> argument that 'nothing exists' other than our own fantasies about the
> sacred is no longer credible, and I do not accept it either. In other words,
> it is entirely possible to talk about the sacred's being dependent on human
> institutions without staking out theological claims that would either deny or
> affirm the possibility of the sacred's acting independently of (or upon)
> these institutions (Wuthnow, 1994: 2-3).

Given these difficulties with finding points of logical contact, interpreting how they

interrelate across knowledge-systems, and recognizing the metaphysical assumptions

within each perspective; it is a wonder that so many individuals and groups are so

readily able to conclude that there exists a necessary conflict between religions and/or

science. And yet, that is exactly what we find example after example of within the

United States, the United Kingdom, and elsewhere. As the issue remains for the time

being, it can be expected that until we start recognizing the complexity of the issues involved with comparisons between the two types of knowing, any analysis offering conclusions equating to any single type within our meta-typology must be met with the most vigilant criticism possible.

1.3 Rationale

The interpretations of conflict derived from the understandings of scientific and/or religious individuals, groups, and institutions are the source of an increasing amount of civil strife within Western countries. The size and scope of these issues and their effect upon the lives of people within Western countries merits attention and requires modes of conceptualization, categorization, theorizing, and research to properly address this issue. One of the most obvious areas to look for potential solutions to the problems concerning the social strife due these interpretations of conflict between scientifically and/or religiously minded individuals and groups is to find social arenas or institutions where individuals and/or groups utilizing differing religious and/or scientific understandings gather together and learn about, or even utilize, alternative perspectives without developing conflicting interpretations regarding the relationship between them. The next step would be to determine what criteria makes this social arena so unique and if the criteria can be applied to larger sections of Western societies.

Lennox explains that, "it is a widespread view that science and religion essentially conflict" (Lennox, 2007: 109) and Barbour explains how "today the popular image of 'the warfare of science and religion' is perpetuated by the media, for whom a controversy is more dramatic" (Barbour, 2000: 10). Conflicting interpretations such as these even extend to such famed and prestigious scientists as Richard Dawkins, the

former Simonyi professor for the public understanding of science at the University of Oxford, who stated at the 2002 Technology, Entertainment, Design Talks in Monterey, California that "it's fair to say that American biologists are in a state of war. The war is so worrying at present with court cases coming up in one state after another that I felt that I had to say something about it."

The war to which Dawkins has made a career of referring to is supposedly one between "science" and "religion" (Haught, 2008: xi; Miller, 2006: 14-15); however, a more specific breakdown reveals a conflicting interpretation of scientific data between supporters of the philosophical ontological position named "naturalism" or "scientific naturalism" (Haught, 2006: 4-6, 21) and social movements representing the understandings of a specific set of monotheistic, religious creationists, of which the Creationist Sciences and Intelligent Design are a part (Branch & Scott, 2009: 92-99; Miller, 2006: 193). Neither of these two positions are necessary conclusions of the biological sciences or their core understanding of the neo-Darwinian synthesis for two distinct reasons: first, as has already been discussed, the natural sciences and differing religions do not use the same language, refer to the same entities, and are not of the same logical type (Barbour, 2000: 77); secondly, the two extreme sides of the evolutionary controversy in the United States add metaphysical interpretations onto biological evolutionary theory in order to utilize it within their own worldview. Alvin Plantinga explains,

> This confusion between Darwinism and unguided Darwinism is a crucial cause of the continuing debate [between science and religion]. Darwinism, the scientific theory, is compatible with theism and theistic religion; unguided Darwinism, a consequence of naturalism, is incompatible with theism but is not entailed by the scientific theory. It is instead a metaphysical or theological add-on (Plantinga: 2009, 116).

Public and academic interest in this subject area has skyrocketed. Bookstore shelves in Western countries are overflowing with books addressing how scientific and religious knowledge intersect, authored by such notable figures as Richard Dawkins, John Polkinghorne, Carl Sagan, Francis Collins, Owen Gingerich, and many more. There even exists an academic group known as the International Society for Science and Religion that is actively spreading awareness of the current and past issues involved with creating constructive dialogue between scientific and religious organizations and finding ways of interpreting scientific and religious knowledge in such a manner that they do not conflict with each other (Watts & Dutton, 2006: vii). Funding agencies have been created in order to fund academic research regarding how scientific and religious knowledge intersect, and university chairs have recently been created to ensure that this area of both public and academic interest is studied and taught in post-secondary institutions (Dixon, 2008: 13-17). Suffice it to say that the issue of perceived conflict between science and religion exists and is having very real social consequences.

However, not all secular and religious social organizations adopt an interpretation of incompatibility or conflict within their understandings of scientific and religious understandings. One such example is religious and philosophical institution known presently as The International Centres for Spiritual Living that has, over the past eighty-three years been attempting to find ways to integrate both scientific and religious knowledge-systems into a coherent whole. Since the Centre's founding as the "Institute of Religious Science and School of Philosophy" in 1927, its members have been inviting academics representing both scientific, historical, and theological disciplines, as well as

other lay-teachers, to speak and to teach classes on their areas of expertise (Braden, 1987: 294-296). These understandings can then be integrated and utilized by different Centres and possibly even incorporated into the International Centre's official teachings. This social institution has grown to become world-wide with over two-hundred chapters existing in many countries throughout the world (Creative Thought, 2009: 58-61; ICSL Website).

It is these types of very unique social institutions that may provide a possible means of understanding how to effectively relate scientific and religious knowledge-systems to one another within Western societies in such a way so as to end or drastically diminish the social strife often involved with the conclusion of conflicting interpretations. As already stated, there is no necessary reason to adopt a conflicting interpretation of these two types of knowing and there are many forms of differing interpretations that are utilized by both religiously and scientifically minded individuals and groups which are not representative of the conflict typology. Therefore, conflicting interpretations appear to be due to the social institutions that people belong to, the social conditions in which they were formed and continue to develop, how they structure, teach, and understand their own knowledge-systems, and how these social organizations understand other social groups and their knowledge-systems as well.

1.4 Outline

This chapter has introduced the main issues involved in the current interpretations of incompatibility and the subsequent interpretations of conflict arrived at by many individuals and social organizations that have historically and presently sought to make known the supposed conflict that exists between scientific and religious forms of

understanding. Some of the belief-systems that often are the cause of conflicting interpretations of sciences and/or religions were addressed, as well as the suggestion that social forces might be primary to the continuing interpretations of conflict that presently exist within Western countries. It also introduced the research question that will guide the research done for the purposes of this study.

Chapter two will address issues pertaining to the critical historians who have, over the last couple of decades, presented a new understanding of the traditional examples of conflict and separation between scientific and religious forms of understanding reality. I also highlight how these issues of conflicting interpretations are being revisited and often criticized due to the additional factors of the particular social situations and institutional constraints being imposed upon or significantly influencing the actors and groups involved throughout history.

Chapter three will explain the how Thomas Kuhn's paradigmatic epistemology offers a means to situate, understand, and explain the origins of the Centres for Spiritual Living, how Kuhn's approach can be utilized to understand historically how conflicting interpretations of knowledge-systems have developed, and how it can provide possible explanations as to how the members of social institutions would be able to avoid interpretations of conflict when they either encounter, utilize, and/or incorporate alternative knowledge-systems into their canon of teachings. Also, the key term of fundamentalism, its origins and history, and its application to the issue of conflict will be addressed.

Chapter four will explain the theoretical synthesis of Kuhn's epistemology and Weber's three ideal types of legitimate authority. The interrelationship of these two

theories for the purposes of this synthesis will be explained as well as how the utilization of both creates a much more coherent and articulated understanding of the relevant issues of scientific and religious understandings and practice. Weber's explanation of legitimate authority will be utilized to ground Kuhn's epistemology in the dynamic social forces that paradigms are created and developed within.

Chapter five will explain the methodology utilized for this research. In order to gain a clear and concise, as well as a multi-faceted understanding of the Centre and their teachings, a triangulation methodology was utilized to provide a many-pronged approach to obtain as much data as possible given the limitations of this study. The triangulation study itself is comprised of two parts: a content analysis and a discourse analysis.

Chapter six will address the history of the Centre along with a brief outline of the New Thought movement with critical issues of importance being interpreted via the theoretical models described in chapter's three and four. This will constitute the content analysis aspect of the triangulation study and provide a coherent framework within which to properly interpret and understand the discourse.

Chapter seven presents the discourse analysis of the study. A discourse analysis dealing with the content of interviews with four ministers and three practitioners-in-training will be analyzed and interpreted with the theoretical models described in chapter's three and four.

Chapter eight focuses on the application of the theoretical models in order to interpret the results of the content and discourse forms of analysis to interpret the

seemingly unique qualities of the Centres for Spiritual Living and to provide

explanations and predictions for the future of this social institution and others like it.

CHAPTER 2: BACKGROUND INFORMATION AND LITERATURE REVIEW

2.1 Where Does the Understanding of Conflict Come From?

Much recent and past literature on the subject of science and religion has

emphasized an interpretation of these two forms of knowing reality that poses them in

conflict with one another. As the eminent historian of the interaction between science

and religion, John Hedley Brooke, states, "in popular literature...one often encounters

the view that there is an underlying conflict between scientific and religious mentalities,

the one dealing in testable facts, the other deserting reason for faith" (Brooke, 1991: 2).

This image of conflict has only increased in recent years due to the writings of the "New

Atheists" who have begun a campaign of "bashing religion in the name of science"

(Consolmagno, 2008: 28). The fundamental problem that must be solved to bring an

end to the civil and academic strife presently existing within Western societies is that of

determining exactly what social situations can influence these interpretations of conflict

between scientific and/or religious knowledge-systems, and how these conditions can

be avoided.

Towards addressing this dilemma, there are very wide-ranging theoretical

perspectives that are utilized within the current literature that deal with the relation

between scientific and religious ways of understanding reality. Many authors take the

metaphysical perspective which states that science produces knowledge relating to the natural, so religion must consequently produce knowledge relating to something else; namely the supernatural, the nonmaterial, the spiritual, beliefs, or symbols (Barbour, 2000: 18; Collins, 2006: 6, 30; Consolmagno, 2008: 11; Dixon, 2008: 3-4; Frazier, 2003: 26; Miller, 2006: 57, 194; Scott, 2004: 3, 19). This perspective, assuming that the "natural" can be directly studied, whereas religious understandings, representing the "supernatural," cannot be directly studied typically relegates religious understandings to the realms of mere belief and metaphor (Dixon, 2008: 3-4; Kurtz, 2003: 24). As will be explained in greater depth in the next few chapters, this metaphysical interpretation is ridiculous due to how science had its beginnings as religious ways of understanding and interpreting reality (Cladis, 2001: xxix); as such, confining religious knowledge to a supernatural realm beyond the natural, while being convenient for scientific purposes, is a misrepresentation of religious activities and knowledge both historically and presently.

It is for this same reason that Stephen Jay Gould's NOMA or "nonoverlapping magisteria" principle, wherein science and religion are incompatible with one another, fails to take into account both the historical and present realities of religious activity. In his popular account, the "net" of science covers the empirical realm, "what is the universe made of (fact) and why does it work this way (theory)." This is placed into a relation with "net" of religious activity as being strictly relegated to extending "over questions of moral meaning and value" (Gould, (1999) 2003: 195). Given how, in the past, religious and scientific activities were inseparable from one another (Numbers, 2009: 16), and that presently there exists much religious activity towards determining what the universe is made of and why it works in the manner that it does (Batton et al.,

2009; Branch & Scott, 2009: 92-99), the NOMA principle must be relegated to a form of wishful thinking.

While many other forms of metaphysical frameworks have been created in attempts to relate scientific and religious understandings to one another, they typically represent entirely new metaphysical frameworks aimed at evoking interpretations of integration into a larger, more elaborate ontology instead of actually addressing the knowledge-systems presently utilized by both scientific and religious individuals and groups. These widely varied and typically individualized metaphysical frameworks have done very little to quell the civil and academic strife due to the ambiguity of the knowledge-systems involved and the seemingly limitless interpretations that can be utilized to relate them to each other.

Instead of attempting to address the issue of conflict by determining relationships between scientific and religious knowledge by differing metaphysical perspectives that take into account as many points of logical contact as possible; one can instead attempt to address the social and institutional influences that seem to perpetuate the interpretations of conflict. Such lines of thought have already been recognized by critical historians but little to no attempt has been made to properly assess the mediating effect of social and institutional factors affecting interpretations of conflict in this area. Brooke explains how these social and institutional factors are so important to obtaining an accurate and valid understanding of scientific and religious interactions that to leave them out of any attempt at an explanation can lead to very erroneous conclusions (Brooke, 1991: 9-11).

2.2 A History of Conflict or a History of Traditional Institutionalized Roles?

The conflict histories were flawed...The scientific achievements of the past were crudely evaluated according to their contribution to later knowledge. A more sensitive approach requires that scientific innovations be judged against the background of prevailing knowledge at the time they were announced. This kind of history in which later knowledge is made the yardstick by which to judge earlier theories is now widely recognized as profoundly unhistorical...and it is still quite common in scientific textbooks (Brooke, 1991: 36-37).

Despite the many controversies over science and religion, it would be misleading to describe their relationship as a war. The most intense conflicts...often pitted Christian against Christian, scientist against scientist, skeptic against skeptic. Over the years most scientists, at least in the United States, have remained theists of one kind or another, and religious organizations have fostered science more frequently than they have inhibited it. Fundamental to the intellectual skirmishes that did break out was genuine, heartfelt disagreement: over the meaning of sacred texts, the boundaries of science, and the implications of science for morality and worldviews (Numbers, 2009: 50).

Thomas Dixon, a professor specializing in the intersection between science and religion, has noted that there are generally two different kinds of attack on the interpretation of conflict. The first involves replacing the overarching image of conflict with complexity concerning the different interactions between scientific and/or religious knowledge-systems at different times, places and local circumstances; the second involves a closer analysis of the social institutions that legitimate knowledge and the manner by which they often restrict, maintain, or expand the production and dissemination of certain types of knowledge (Dixon, 2008: 9-10). The ambiguous conclusion of 'complexity,' while useful to the extent that it can be utilized to refute false theories of the relationship between science and religion, is of little benefit due to how no conclusions can be derived from it; his second point, however, opens the door to sociological forms of analysis.

The usefulness of sociological forms of analysis of conflicting interpretations is easily highlighted utilizing examples taken from the historical record. Two easily recognizable examples have often been employed to support an interpretation that scientific and religious forms of knowing are in conflict with one another (Dixon, 2008: 73; Lennox, 2007: 111). The first is Galileo's trial by the Roman Catholic Inquisition in 1633, and the second is the famous debate between Darwin's Bulldog, T. H. Huxley, and Bishop Samuel Wilberforce at the British Association for the Advancement of Science in Oxford in 1860 (Dixon, 2008: 30, 73). These two historical events are often imagined as being representative of "the main source[s] of conflict between science and religion" (Plantinga, 2009: 103).

During these two historical events, there was indeed an interpretation of incompatibility between the understandings represented by both sides. However, a closer look at the historical events occurring around the same period of time as well as the social structures within which these events unfolded and within which they were interpreted provides a very useful context and framework for arguing that interpretations of conflict between scientific and religious forms of understanding cannot be justified with these historical events. While there were interpretations of conflict between two opposing and incompatible knowledge-systems; the differing knowledge-systems were not science and religion. Instead, upon closer inspection, we find a myriad of differing worldviews and knowledge-systems held by both the religiously and the scientifically minded individuals and groups involved. These individuals and groups would interact within and between differing social organizations while also being influenced greatly by

other social pressures from elsewhere in their societies to generate the historical outcome of these two complex and ultimately influential historical events.

In the case of Galileo Galilei's trial, there is often a modern interpretation of conflict between Galileo's scientific analysis of the universe and the Roman Catholic dogma defended by the church at that time (Dixon, 2008: 1-2; Moy, (2001) 2003: 143). An interpretation of incompatibility did exist between Galileo's natural philosophy, which adopted the Copernican model of the solar system to structure his understandings of physical reality, and the predominantly accepted merging of Aristotelian physics, Ptolemaic astronomy, and Catholic dogma created by St. Thomas Acquinas which was held by most natural philosophers and many within the Roman Catholic Church at that time (Brooke, 1991: 60-61; Consolmagno, 2008: 10-11; Dixon, 2008: 21). More recently, however, historians specializing in the area of science and religion have begun to examine this often quoted example of conflict between 'scientific' and 'religious' knowledge with reference to the wider social and institutional conditions within which these events took place and recognized several other social factors that appear to have also greatly influenced this situation. Brooke explains,

> It would...be quite wrong to imagine that opposition to the Copernican theory derived only from religious prejudice. In 1543 an earth-centered cosmos was the physical orthodoxy of the day, supported by philosophical arguments that, at the time, were peculiarly compelling. Until an effective principle of inertia had been formulated, the earth's motion was contradicted by common sense (Brooke, 1991: 37).

Several social and institutional factors seemed to influence directly the events that led to Galileo's trial and house arrest. The Roman Catholic geocentric understanding of the universe, far from being representative of static dogma, was a

fusion of differing and often incompatible perspectives (Brooke, 1991: 60), and could be interpreted as being representative of how dynamic the thinking of religious individuals and groups at that time could be. However, in this particular case, Galileo was challenging the orthodox understandings of his day by promoting a new integrationist model between his own philosophical position and Catholic dogma; his principal claim was that God had created both nature and scripture but there were definite differences between the two.

While Galileo was willing to give the Bible jurisdiction over scientific hypotheses that had not been rigorously demonstrated, he rejected any assumption of a necessary one-to-one relationship between the Bible and the natural world stating that the Bible teaches how to go to heaven, not how the heavens go (Brooke, 1991: 54, 57). This interpretation became problematic, due not to a necessary incompatibility with accepted Catholic understandings (ibid: 37-38), but instead to the lack of social support and external social circumstances within which he was writing and speaking (Dixon, 2008: 18, 28, 30). It was these factors which added connotations to his work that need not have been there (Brooke, 1991: 8, 46).

At the time of Galileo's trial in 1633, he had adopted and was utilizing the Copernican model of the universe, representing it as an accurate description of reality. This was a minority position held by only a few natural philosophers at the time (Dixon, 2008: 23). In order to integrate his theories into accepted Roman Catholic theology, Galileo made use of St. Augustine's "principle of accommodation" which explains that "the Bible was written in language accommodated to the limited knowledge of the relatively uneducated people to whom it was initially revealed" (ibid: 26). This same

principle had been utilized to make sense of other aspects of Biblical theology by Galileo's time but he was unable to gain acceptance for his interpretation due to the "Counter-Reformation" movement and the subsequent restrictions regarding legitimate knowledge that were agreed upon by the Council of Trent (Brooke, 1991: 8; Dixon, 2008: 27). Galileo's personal understandings simply did not match the necessarily criteria, both in terms of the Catholic Church's standards, as well as his own (Barbour, 2000: 8; Dixon, 2008: 30-31). Timothy Moy explains how "Galileo's new proof made no sense; it was a convoluted argument about how the motion of the tides proves that Earth orbits the Sun, and it simply did not work. When push came to shove (and it did), Galileo simply did not know how to prove that Earth truly moved" (Moy, (2001) 2003: 140-141).

Consequently, his understandings were interpreted as being incompatible with the Catholic Church's teachings at that time, but not simply because his understandings contradicted accepted church dogma; there were others who had authoritative positions within the church who also accepted his understandings (Brooke, 1991: 37-38). This incompatibility was due to his inability to gain social support for his ideas; more specifically, his inability to gain support for his ideas from individuals in authoritative positions within the Catholic Church. Barbour and Dixon explain,

> Galileo introduced a qualification that opened the door to Conflict. He said that we should accept a literal interpretation of scripture unless a scientific theory that conflicts with it can be irrefutably demonstrated. He overstated the scientific certainty he could provide at a time when there was still considerable disagreement among astronomers. Moreover, the Catholic hierarchy felt under threat from the Protestant Reformation and was eager to reassert its authority (Barbour, 2000: 8).
>
> Galileo was found guilty of promoting the heretical Copernican view in contravention of the express injunction not to do so that he had received in

1616. It was for disobeying the Church, rather than for seeking to understand the natural world through observation and reasoning, that Galileo was condemned. Galileo's political misjudgement of his relationship with Pope Urban VIII played as much of a role in his downfall as did his over-reaching of himself in the field of biblical interpretation (Dixon, 2008: 30).

Galileo was never charged with or tried for heresy, as is commonly believed (Moy, (2001) 2003: 141). His crime was disobeying an injunction placed against him in 1616 to discuss heliocentrism only hypothetically until he could provide definitive proof that it was representative of reality. "Galileo admitted that he had gone a bit too far in promoting heliocentrism as truth without sufficient proof and promised not to do it again." For this crime, Galileo was found guilty of a "'vehement suspicion of heresy' (which was not nearly as bad as heresy itself but still worse than disobedience and teachings contrary to Scripture)" (ibid: 141).

The second iconic example of scientific and religious understandings coming into conflict is the famous encounter between T. H. Huxley and Bishop Samuel Wilberforce in 1860. This meeting took place at the British Association for the Advancement of Science in Oxford and although there is no written account of what exactly was said, there were many witnesses present and a debate among these two individuals did actually take place (Brooke, 1991: 40-41; Dixon, 2008: 73-74). A historical investigation into what Huxley's and Wilberforce's arguments may actually have been are typically found from two sources: Huxley's account of the incident that was thirty-one years old when it was taken (Dixon, 2008: 73), and the indirect inference to Wilberforce's arguments which came from his review of "On the Origin of Species" in the 'Quarterly Review'; a review about which Charles Darwin responded "it picks out

with skill all the most conjectural parts, and brings forward well all the difficulties"

(Brooke, 1991: 41-42).

One source suggests that there was indeed a conflict between scientific and

religious beliefs, while the other seems to suggest that there was a conflict between two

rival interpretations of scientific understandings. T. H. Huxley was a man who

continuously attempted to maintain a conflicting interpretation between scientific and

religious understandings throughout his academic career. He continually maintained a

vested interest in building the autonomy of the sciences at the expense of the religious

institutions that they were originally a part of by promoting interpretations of conflict

between the two whenever possible. This type of interpretation eventually became

authoritative due to Huxley's eventual ascendency to the position of President of the

Royal Society (Brooke, 1991: 5, 50; Dixon, 2008: 75-76). Bishop Wilberforce's

arguments, on the other hand, appeared to be as scientifically-based as possible and

he consciously attempted to remove all strictly religious interpretations from them (ibid).

Dixon and Brooke explain,

> The Huxley-Wilberforce story was...used retrospectively, as a piece of victors' history, to suggest a clearer triumph for scientific naturalism over Anglican conservatism than had really been achieved in Oxford in 1860. It suited the new elite to be able to tell the story in a way that seemed to foreshadow and legitimize their own rise to power, while simultaneously depoliticizing the issue (Dixon, 2008: 75).

> In his efforts to boost the profile of a rapidly professionalizing scientific community, at the expense of the cultural and educational leadership of the clergy, Darwin's champion, T. H. Huxley, found a conflict model congenial. Extinguished theologians, he declared, lie about the cradle of every science as the strangled snakes beside that of Hercules (Brooke, 1991: 5).

From these two iconic historical examples which are often utilized in support of interpretations of conflict between scientific and religious knowledge, we are able to observe how social circumstances and institutional structures had a very large part to play in these events as well - such a large part, in fact, that one can make a reasonable argument that social structures along with individuals who had their interests mediated by the roles that they possessed in those structures, actually created an illusion of conflict where none may have existed at all. Individual authority, social movements, and bureaucratic structures all had an important role to play in both of these historical events.

2.3 The Relationship between Religion and Science: When did a Historical Means of Differentiation Occur?

Historically there were no means by which to differentiate between scientific and religious knowledge (Cladis, 2001: xxix). Institutional variations began with the creation of the early 'scientific' societies from the early to mid-sixteenth century (Daston, 2009: 42). However, the conceptual distinction that created the divide in the public or academic mindset did not begin until the early decades of the 19th century (Numbers, 2009: 15). A historical review of scientific development over the past five centuries reveals that, it is very difficult to articulate rationally the boundaries between religion and the science. This is mostly due to a historical and present inability to rationalize what exactly the categories of science and religion are. Supposedly, scientific and religious activity became recognizable and rationally identifiable during the scientific revolution, but, as will be demonstrated, there are serious problems with this overgeneralization in the historical record.

In order to address the problem of differentiating science from religion, we must begin with the recognition that historically, there was no distinction to be made between the two. Science began as a part of religious institutions, "specifically, as that aspect of religion that concerned itself with interpretation and explanation" (Cladis, 2001: xxix). Examples of what are currently 'scientific' disciplines that existed prior to an understanding of difference between scientific and religious forms of knowing such as mathematics, astronomy, medicine, and optics were and are being utilized by religious institutions as well to gain a more comprehensive understanding of reality. These disciplines, among others, were utilized within differing religious institutional settings throughout the historical record stretching back all the way to the 9th century and arguably back to ancient Greece as well (Batten et al., 2009; Branch & Scott: 92-99; Dixon, 2, 15-16; Consolmagno, 2008: 30; Sagan, 1996: 38).

While 'scientific' societies did exist as far back as the early 16th century, there was no actual conceptual break between scientific and religious activity until the early decades of the 19th century. The early 'scientific' societies, such as the Academia dei Lincei in Rome, the Academia Naturae Curiorsorum in Germany, the Royal Society of London, and the Academie des Sciences in Paris represented an institutional break, but not necessarily a conceptual or theological break, between the activities of these natural philosophers and/or natural historians and the religious institutions of the day. These societies allowed natural philosopher and/or natural historians to perform their work and to draw their conclusions independently of the theological interests held to by the religious institutions of the day (Brooke, 1991: 58; Daston, 2009: 42). This institutional state of affairs, however, did not make their work distinct from religious activities.

Ronald Numbers, a historian who specializes in the relationship of science and religion, explains,

> Talk of the relations between 'science' and 'religion' first became audible in the early 1800s, about the time that students of nature began referring to their work as science rather than natural philosophy (or natural history). Because natural philosophy allowed its practitioners, in the words of Isaac Newton, to discourse about God 'from the appearances of things,' one searches almost in vain for references to 'natural philosophy and religion.' Some writers expressed concern about tension between faith and reason, but they never pitted religion against science (Numbers, 2009: 15).

While this conceptual distinction between religion and science seemed to take hold in the early decades of the 19th century, there was never a complete severance between religious and scientific understandings of the world. Brooke explains,

> a change in the status of natural philosophy was certainly achieved, but by differentiation from, and reintegration with, religious belief rather than by complete severance...Rather than identify a point in time when some separation was effected, it is more constructive to locate successive shifts in the degree of subordination and the grounds of differentiation" (Brooke, 1991: 58).

Often there are shared metaphysical assumptions between scientific and religious knowledge-producing enterprises due to how the sciences maintained them from their religious beginnings. Many of the sciences most basic ontological assumptions come from their Christian and Islamic religious institutional backgrounds. The most basic ontological assumptions that the sciences must make, which is absolutely essential to any scientific form of analysis, derive from their religious origins. Among these is the belief that the universe is orderly and therefore theoretically understandable (Lennox, 2007: 110; Rossano, 2007: 2). Sir Alfred North Whitehead, the famous mathematician and philosopher, while seeking to explain how knowledge of

the natural world had progressed so rapidly from the 16th century to the 18th century, concluded that "modern science must come from the mediaeval insistence on the rationality of God" (Whitehead, 1925: 19); this point was echoed by the academic and Christian apologist C. S. Lewis, who explained that early scientists created and utilized modes of scientific analysis, expecting to discover laws in nature due to their belief in a divine law giver (Lewis, 1947: 110).

Besides the often shared axiomatic assumptions between the two, another problem with differentiating science from religion is in finding logical points of coherency between scientific and religious knowledge and practice. According to Wilfred Cantwell Smith, the former director of Harvard's Centre for the Study of World Religions, "'religion' is a concept created by modern western scholars and superimposed upon a variety of phenomena; the superimposition serving to create the impression that 'religion' is a unified thing. This superimposition gradually began to take place...in the 18th century" (Harrison, 2006: 140). Prior to the 'religion' conception, there were only "a variety of interconnected practices and beliefs embedded in the various cultures of the world" (ibid). Victoria Harrison, a philosopher at the University of Glasgow, concludes that there is no logical manner by which to delimit religious phenomena from other social phenomena. She also emphasizes that it is extremely difficult to even delimit many of the major world religions; making a search for unifying teachings and structures among all religions, both global and community-based in scope a ludicrous task (ibid: 147). Dr. Fraser Watts, a research psychologist and Anglican minister, elaborates,

> Important differences exist between so-called religions. Indeed, it may be misleading to talk about 'religions' at all. It is not just that the faith traditions of the world differ from one another in important ways; they are not even the same kind of thing. Most religions are concerned, to some

degree, with both faith and practice. However, the balance of emphasis between the two differs from one faith tradition to another (Watts, 2006: 57).

A similar situation arises while attempting to delimit scientific knowledge and practice as well. The eminent historian and sociologist of science, Steven Shapin, has explained that "[science] enjoys unique authority – but that authority does not seem to consist either in lay possession of any specific set of scientific beliefs, no matter how elementary or fundamental, nor in any stable sense of the Method scientists supposedly used to guarantee the power of their knowledge" (Shapin, 2007: 12). This observation is agreed upon by many in the history and the philosophy of science (Medawar, 1984: 51; Nielson, 1990: 4). Shapin has also explained how the 'Unity of Science' movement, that existed in the early and middle part of the twentieth century as an attempt to conceptually unify all the sciences, utterly failed to do so (Shapin, 2007: 12).

In addressing these issues, there is often a reference back to the historical 'event' known as the scientific revolution. It was this 'revolution that supposedly brought scientists and scientific activity to prominence between the late sixteenth century and the early eighteenth century. According to standard historical accounts, it was during this time there was a radical change in the manner in which people understood the natural world and the proper means by which to secure knowledge of that world (Shapin, 1996: 1). The term itself was probably coined by Alexander Koyre in 1939 and first became a book title in 1954. The main problem with this "event," however, is that "there [was] no such thing as the Scientific Revolution" (ibid). The term came into common use representing no overarching event or discrete object of historical inquiry that could be linked with the separation of scientific knowledge and practice from its

religious beginnings. Instead, what a critical historian of science finds is "a diverse array of cultural practices aimed at understanding, explaining, and controlling the natural world, each with different characteristics and each experiencing different modes of change" (ibid: 3).

This is not to deny the existence of significant changes regarding the status of both knowledge and knowledge production among the many different individuals and groups attempting to understand reality at that time, but to emphasize the actual intermingling of both 'religious' and 'scientific' forms of understandings instead of any definitive disconnect between them (Brooke, 1991: 58). There was no institutional form of scientific understandings such as there are today; instead, at the time of the 'scientific revolution', there were very diverse and integrated forms of understandings, often premised upon greatly differing metaphysical assumptions. The pioneers of early scientific practice were representative of such diverse perspectives as natural philosophy, natural theology, theistic evolution, Christianity, and many differing personal theologies (Brooke, 1991: 56; Dixon, 2008: 71; Lennox, 2007: 110; Unwin, 2003: 16-19). An almost universally accepted epistemological criterion that greatly limited acceptable natural scientific inquiry in comparison with other religious individuals, groups, communities, and institutions, did not exist until T. H. Huxley introduced 'methodological naturalism/materialism' in the latter half of the nineteenth century (Haught, 2006: 5).

Exemplifications of the absence of such a 'revolution' where science became differentiated from religion can be easily demonstrated in the manner by which many of the most important individuals in the history of science understood reality. Dixon

explains how "Pioneers of early modern science such as Isaac Newton and Robert Boyle saw their work as part of a religious enterprise devoted to understanding God's creation" (Dixon, 2008: 2). Many of the most important scientists in history such as Bacon, Boyle, Copernicus, Galileo, Kepler, Descartes, Newton, and Einstein were all greatly influenced by the religions of their day and their religious beliefs played an important part in their supposedly 'scientific' activities. For example, Johannes Kepler utilized a new form of empiricism based upon his theological understandings to determine his results. Boyle and Descartes emphasized their mechanistic understanding of the universe as a means by which to emphasize the sovereignty of God over his creation, and Einstein determined his physical models of the universe by way of judgements based upon his own theistic understandings of God (Brooke, 1991: 26, 28-29, 56-57; Consolmagno, 2008: 30; Dixon, 2008: 46-47; Unwin, 2003: 16-19).

Instead of any overarching or discrete event that effected change within religious institutions and caused the development of what is referred to today as 'science' we find a myriad of differing individuals and groups who were creating unique ways of understanding, interpreting, and manipulating the reality around them (Shapin, 1996: 3). There does not appear to be a unifying conception and thereby an analytically useful definition of either science or religion and therefore comparing the two becomes incredibly problematic. Consequently, as we search for ways in which to engage the supposed conflicts between the two, we must first be careful to find theories that are able to interpret both the present and the historical reality of these two complex types of social phenomena.

CHAPTER 3: FAMILY RESEMBLANCES AND PARADIGMS

3.1 How to Define Religion and Science

> Children may learn science as nothing but a big book of facts (and religion an equally big book of rules), but those who practice know that both science and religion are an often exhilarating whirlwind of arguments and countercurrents as we struggle to fit a structure that we think we have confidence in, around what we experience every day in our labs and in our lives (Consolmagno, 2008: 31).

It would appear as though, while there is very little difficulty with the actual recognition of scientific and religious institutions and activities, it is extremely difficult to logically or rationally define just what exactly makes science 'scientific' or religions 'religious' (Harrison, 2006: 133; Nielsen, 1990: 3). Consequently, since logical and rational definitions are not presently possible given the present inability for experts in the fields of science and religion to define these ways of organizing and understanding in a way that takes into account all the phenomena that the terms are supposed to represent while still remaining practical for research purposes, none shall be utilized here. Instead the social activities that are recognized as being scientific or religious shall be analysed utilizing their social beginnings, development, and conceptual existence.

Religion can and often does tackle all aspects of existence as they are experienced and understood by a group or a community (Simmel, 1979: 4-5; Weber, 1993: 58-59) whereas scientific activity is a lot more specified and narrow in what it attempts to explain (Barbour, 2000: 18; Gingerich, 2006: 11-12; Scott, 2004: 67). Consequently, different religions have not ignored and presently do not necessarily

ignore those material aspects of reality that science studies (Batten et al., 2009; Branch & Scott, 2009: 92-99; Dixon, 2008: 15-16). This dimension of religion often is not recognized with attempts to relegate religious knowledge to the realm of the supernatural, and is made obvious historically when it is recognized that science developed out of those aspects of religion that specifically dealt with understanding aspects of what is now referred to as the natural world (Cladis, 2001: xxix). Max Weber, one of the founders of the sociology of religion (Fischoff, 1991: xx), explains how,

> prophetic revelation involves for both the prophet himself and for his followers...a unified view of the world derived from a consciously integrated and meaningful attitude toward life...it always denotes, regardless of any variations in scope and in measure of success, an effort to systematize all the manifestations of life; that is, to organize practical behaviour into a direction of life, regardless of the form it may assume in any individual case (Weber, 1993: 58-59).

The ambiguity of the word 'religion' and the myriad of different attempts to explain it have begun to cumulate into an immense morass of literature. One of the first recognizable difficulties in defining religion is that it has no historical beginning like the sciences do. Karen Armstrong, a very eminent theologian who has studied many world religions, describes the present inability to find humanity's religious beginnings and how the social activities that the term religion addresses are so universal to human development throughout the historical record, it may be the case that religiosity is a part of all human activity. She elaborates, stating,

> my study of the history of religion has revealed that human beings are spiritual animals. Indeed, there is a case for arguing that Homo sapiens is also Homo religiosus. Men and women started to worship gods as soon as they became recognizably human; they created religions at the same time as they created works of art…Like art, religion has been an attempt to find meaning and value in life, despite the suffering that flesh is heir to (Armstrong, 1993: xix).

[Religion] was not tacked on to a primordially secular nature by manipulative kings and priests but was natural to humanity. Indeed, our current secularism is an entirely new experiment, unprecedented in human history (ibid).

The inevitable consequence of defining the term religion, requires either a definition so abstract as to be analytically useless or an analytically useful definition that is only applicable to some religious groups and institutions. One manifestation of this problem is expressed in the difficulty, if not impossibility, to define functionally many of the great world religions (Harrison, 2006: 147; Weber, 1993: 1) since how "believers in a particular religion conceive of the Ultimate varies enormously" (Scott, 2004: 48). When you combine these problems with the many differing tribal types of religions that are simply a way of life (Barbour, 2000: 20; Scott, 2004: 49), it is not presently understood what unifying factors a functional definition would contain. Weber explains,

The external course of religious behaviour are so diverse that an understanding of this behaviour can only be achieved from the viewpoint of the subjective experiences, ideas, and purposes of the individuals concerned – in short, from the viewpoint of the religious behaviour's 'meaning' (Weber, 1993: 1).

Science too is a particular type of knowledge producing social endeavour that defies definition (Brooke, 1991: 6; Lennox, 2007: 111-112). While there is agreement among many historians and philosophers of science regarding 'science' as both a systematic body of knowledge and the means of accumulating that knowledge (Medawar, 1984: 3; Scott, 2004: 3), to specify or narrow those two points to something analytically useful appears to be very problematic. Many definitions have been attempted, just as many listings of a 'scientific method' have been recorded. The

problematic nature of this situation is that there does not seem to be a manner by which

either science or scientific activity can be defined in such a way as to include the myriad

range of all disciplines presently labelled 'scientific' while still remaining precise enough

to delimit science from other social activities, such as religious ones (Brooke, 1991: 6;

Shapin, 2007: 11).

To explain how science, often identified as conceptually distinct from many

religious understandings, is difficult to define analytically, we can dissect the definition

provided by the U.S. National Academy of Sciences and the Institute of Medicine in their

2008 publication "Science, Evolution, and Creationism" - which defines science as: "the

use of evidence to construct testable explanations and predictions of natural

phenomena, as well as the knowledge generated through this process" (National

Academy of Sciences, 2008: 10). Unfortunately, the only two terms that were qualified

in this definition were 'natural causes' which were defined as reproducible in such a

manner that they would be checked independently by others, and 'testable' which was

meant to reference falsifiability; meaning a theory must be able to be determined as

being wrong so as to make it testable.

The ambiguous terms utilized in this definition, that were not qualified elsewhere

in the publication, exemplify how differentiated scientific disciplines actually are, and

consequently, how problematic the attempts at defining science can be. There was no

qualifier for what counts as evidence, adequate testing procedures, or the extent of

agreement that must be reached between researchers to determine a 'natural cause.'

The issue of falsifiability brought forth in this definition is also highly problematic due to

the many scientific disciplines that are not and cannot be primarily experimental in their

scientific investigations (Nielsen, 1990: 4). Given the ambiguity of this definition, it is

analytically useless and could easily be representative of many religious activities (i.e.

the practice of sacraments in many Christian religions).

This ambiguity of both scientific and religious categorization is not solvable even

at the empirical level. Georg Simmel, an early sociologist of religion, explains how both

religions and sciences can produce valid knowledge about the natural universe.

Utilizing similar 'visual' and 'conceptual' sensations, religious experiences can be

"augmented by standards of value and shades of feeling, arranged in different

dimensions and assigned a quite different focus and perspective. Thus the very same

material seems to produce the empirical, the philosophical or the artistic order" (Simmel,

1959: 4-5).

For Simmel, the reason why there is not necessarily a difference in the subject

matter of science and religion is because religious understandings do not necessarily

contain conceptual boundaries; whereas scientific understandings necessitate

conceptual boundaries to such a great extent that they can even have an ontological

primacy that structures empirical observations and testing (Brooke, 1991: 28; Kuhn,

1970: 76; Maxwell, 2009: 367-368; Schutz, 1967: 4). This means that scientific

knowledge has the potential to be completely abstracted or removed from the realm of

the everyday experience of the individual. However, since religions, at their most all

encompassing dimensions, can only be a label representing an entire way of life for a

group of individuals, they often cannot be abstracted from the experiences of their

adherents, and consequently, they can potentially be unbounded in terms of what they

can legitimately study or interpret. Simmel and Kuhn elaborate upon how religious

categorizations of experience can remain unbounded but, historically, scientific

categorizations of experience have traditionally been bound by the presently accepted

knowledge framework;

> Just as objects of experience are recognizable, because the form and norms of perception have achieved their structure out of the mere material of the sense; just as we are therefore capable of abstracting the law of causality from our experiences, because we have fashioned them accordingly (for only so, after all do they become 'experiences'); so objects are religiously important and raise themselves to transcendental forms because and insofar as they are absorbed by the religious category which determines their formation, before they can be considered as being known and entirely recognized as religious phenomena (Simmel, 1959: 6-7).

> Philosophers of science have repeatedly demonstrated that more than one theoretical construction can always be placed upon a given collection of data. History of science indicates that, particularly in the early developmental stages of a new paradigm, it is not even very difficult to invent such alternates. But the invention of alternates is just what scientists seldom undertake except during the pre-paradigm stage of their science's development and at very special occasions during its subsequent evolution. So long as the tools a paradigm supplies continue to prove capable of solving the problems it defines, science moves fastest and penetrates most deeply through confident employment of these tools (Kuhn, 1970: 76).

3.2 Family Resemblances

The ability of individuals living in contemporary Western societies to identify and

at least partially describe both scientific and religious institutions and practices while, at

the same time, being unable to articulate a practical or delimiting definition of either to

compare and contrast the two types of knowledge and knowledge producing activities

fits very well into the mode of categorization proposed by Ludwig Wittgenstein, an

eminent philosopher, known as "family resemblances." This mode of categorization

allows for the discussion and analysis of particular phenomena that, contrary to surface

appearances, do not have any unified or defining features among them all. In recent

years many researchers and theorists have been utilizing this formulation to interpret

both religious and scientific institutions and their knowledge-producing activities

(Harrison, 2006: 141-142; Preston, 2008: 35; Ruthven, 2007: 6). Harrison elaborates,

> Later thinkers...have proposed that one reason why religion is so difficult to define might be because 'religion' is one of these concepts that do not refer to things possessing a single defining characteristic. Perhaps, instead, 'religion' is a complex concept used to refer to things sharing a number of features...not all of which need be present (Harrison, 2006: 142).

These family resemblances within scientific and religious institutions and

practices appear to exist in relation to often undefined metaphysical assumptions of

each perspective, as well as the theories, methods, and standards of problem

identification and solution (Barbour, 2000: 26; Kuhn, 1970: 109). These can represent

everything from the primary assumption that reality is structured and orderly, to the

criteria that both religious and scientific individuals and groups accept for selection,

evaluation, and criticism of both beliefs and data. These criteria that are recognized in

the concept of family resemblances need not be well defined but can remain vague and

ambiguous in both scientific and religious categorization (Barbour, 2000: 26; Kuhn,

1970: 44).

The metaphysical assumptions existing within and only partially defining the

'family resemblances' between sciences and religions need not be mutually exclusive

and the interpretation of relevant practices which lead to scientific or religious

understandings need not be different either. As many philosophers, theologians, and

scientific historians have pointed out, all scientific and religious activity relies upon a

metaphysical assumption that reality is orderly and intelligible; the original reasoning

behind this assumption in both types of understanding being a theistic assumption that

reality was created (Barbour, 2000: 23; Gingerich, 2006: 71-72; Lennox, 2007: 110;

Rossano, 2007: 2). The assumption of a created reality is why the ancient Greeks

would utilize deduction from what they considered to be first principles in order to

determine a logical structure to the universe (Barbour, 2000: 23). Since then, within the

sciences, there has been an assumption of a strictly inductive way of determining the

structure of the universe known as the Baconian inductivist approach where the

"scientist who properly performs his craft is one who patiently collects facts, assembles

them in a logical and orderly fashion, and lets explanations arise out of this network of

ideas" (Scott, 2004: 80-81). A scientific explanation was considered proven when it

accounted for all the facts and was therefore a complete and certain law of nature. This

interpretation of scientific activity has been increasingly challenged in recent years

(Kuhn, 1970: 28; Nielson, 1990: 12; Scott, 2004: 80-81; Shapin, 1996: 90). As the

sociologist Joyce Nielson explains,

> Until recently, most people thought of science as a cumulative process of
> the discovery of increasingly correct descriptions of the physical world.
> That is, there seemed to be an increasingly better fit between the theories
> of science and what we thought of as an independent, physical reality.
> The phenomenal success of scientific inquiry seemed to be a function of
> continuously testing increasingly accurate theories about nature against
> what was considered a given empirical reality. Kuhn's analysis challenged
> this conception of science, describing it instead as a social-historical
> process of paradigm transitions (Nielson, 1990: 12).

Strictly inductive or deductive forms of logic do not fit with our present-day

understandings of scientific and religious activity. If scientists or religious individuals

simply utilized deductive logic from assumed first principles then there would be no

need for a distinction between science or religion and philosophy; also, there would be

no need for falsifiable theories that allowed for testing and experimentation within the

sciences (Scott, 2004: 3). Purely inductive logic also appears a specious argument due

to how there would be no means by which to determine criteria for the selection,

evaluation, and criticism of facts and theories without assumed metaphysical

assumptions guiding the criteria for what phenomena are useful and which are not. As

such, all purported facts and theories would appear equally relevant to whatever

phenomena are being investigated (Kuhn, 1970: 16-17, Preston, 2008: 25). It is also

widely recognized that no methodological guidance can operate in such a way as to

make inductive logic in any way necessarily equitable to truth (Kuhn, 1970: 80;

Medawar, 1984: 14, 16). Medawar and Shapin elaborate,

> I go along with the opinion of William Whewell, Bertrand Russell and Karl Popper that scientists do not make their discoveries by induction or by the practice of any other one method. 'The' scientific method is therefore illusory. 'An art of discovery is not possible,' said William Whewell, and more than a century later we can say with equal confidence that there is no such thing as a calculus of discovery or a schedule of rules by following which we are conducted to truth" (Medawar, 1984: 16).

> We are now much more dubious of claims that there is anything like 'a scientific method' – a coherent, universal, and efficacious set of procedures for making scientific knowledge – and still more sceptical of stories that locate its origin in the seventeenth century, from which time it has been unproblematically passed on to us (Shapin, 1996: 3-4).

3.3 Paradigmatic Models

Thomas Kuhn developed a theoretical model of the natural sciences in his book

"The Structure of Scientific Revolutions" wherein he utilized Wittgenstein's concept of

'family resemblances' to interpret the historical and present-day trends in scientific

activity and knowledge-production (Preston, 2008: 35). He developed his conception of

paradigms to explain the trends and changes he observed throughout his analysis of scientific history, creating a model of the sciences where paradigms are invented, developed, and modified in direct relation to social and historical circumstances. In turn, these paradigms both restrict and structure the worldview of scientific researchers and determine the theories, methods, and standards utilized by them (Kuhn, 1970: 109; Nielson, 1990: 13). Later theorists have also suggested that this paradigmatic model is applicable to religious groups and institutions (Barbour, 2000: 26; Shedinger, 2000: 459-466), making it an ideal theoretical base by which to understand scientific and religious understandings and interactions. Nielson gives a brief summary of Kuhn's interpretation of how paradigms operate;

> Kuhn's argument can be summarized by saying that data or observations are theory-laden (that is, the scientist only sees data in terms of their relevance to theory); that theories are paradigm-laden (explanations are grounded in worldviews); and that paradigms are culture-laden (worldviews, including ideas about human nature, vary historically and across cultures) (Nielson, 1990: 13).

The explanation concerning what exactly is common across all social institutions where scientific knowledge and practices exist appears to be largely unarticulated and the axiomatic assumptions concerning the natural universe that necessarily must exist for a coherent structuring of both knowledge and knowledge production are largely undefined. What Kuhn recognized was that trends existed within scientific history that could be explained with Wittgenstein's 'family resemblances' conception (Wittgenstein, 1959: paragraph 66). These family resemblances were in reference to the various metaphysical assumptions, research problems, problem-solutions, and the techniques that both current and past natural philosophers and scientists utilized to produce

knowledge of reality. It was the recognition of particular historical trends and structures

within the natural sciences that, over time, led Kuhn to develop his epistemology of

paradigms and paradigm-development (Kuhn, 1970: 6). John Preston, a philosopher

and an expert on Kuhn's writings, explains how Kuhn's paradigmatic epistemology is

able to categorize and interpret a form of knowing that, according to Shapin, shares no

beliefs or methods that provide it with coherency;

> Following the well-known discussion of 'family resemblance' concepts in
> Wittgenstein's Philosophical Investigations...Kuhn urges that the various
> research problems and techniques current within a normal-scientific
> tradition need have nothing in common, but may be related only by
> resemblance. Because scientists do not need to know why the models
> they acquire through their scientific education have the status of
> paradigms, they do not need any full set of rules which tell them why
> (Preston, 2008: 35).

Scientific paradigms, according to Kuhn, are representative of a consensus

among scientists concerning metaphysical assumptions, theories, methods, and

standards. This consensus, however, is often not able to be fully articulated because it

is not a consensus about statements. It involves the manner in which scientists are

taught "standard ways to solve selected problems in which theoretical terms figure"

(Preston, 2008: 37). They operate in such a manner that they are taught to students in

the sciences as modes of practice instead of explicitly as theories, statements, and

rules. These forms of observations, where scientists operate according to their

teachings yet could not explicitly state what those teachings are, parallel closely those

of Sir Peter Medawar, a Nobel-prize winning immunologist, he explains,

> There is indeed no such thing as 'the' scientific method. A scientist uses a
> very great variety of exploratory stratagems, and although a scientist has
> a certain address to his problems – a certain way of going about things

that is more likely to bring success than the gropings of an amateur – he uses no procedure of discovery that can be logically scripted (Medawar, 1984: 51).

While he acknowledged that these often could not be articulated fully, Kuhn recognized a definite pattern of identifiable paradigmatic development and types of change that were consistent throughout the historical record. This collection of largely unarticulated understandings that governed and continues to govern scientific practice, which Kuhn referred to as paradigms, is the foundation of science. Science, according to Kuhn, "is not some set or sets of premises, or even a single method, but rather certain forms of training. Scientists fall into communities not because they agree in their beliefs, but because they agree in...their training, their education" (Preston, 2008: 36). Such is often the situation in religious institutions as well, one example being how "the sacred is not clearly defined and the ways of addressing it are not narrowly delineated" (Wuthnow, 1994: 54) although, in a situation similar to scientific disciplines, sub-disciplines, and communities, the establishment of norms for communal or group harmony and organizational effectiveness require a paradigmatic framework that establishes a set of limitations upon what the sacred or reality as a whole can be (ibid: 55). Religious communities and groups also appear to often operate without an agreement upon premises or methods (ibid: 160-161). A realist assumption is also often present within both scientific and religious practice as they seem to be dealing with a reality external to themselves which is influenced greatly by both the scientific and/or religious interpretation of sensory experience; as well as often assuming that reality only exists in one way (Preston, 2008: 36, 43-44). Wuthnow elaborates,

Although there are some exceptions, congregations also come to resemble one another because they are in business not to invent the sacred but to encourage people to discover it...The avenue of discovery may be unique for each individual, but what is discovered has an existence independent of the seeker's imagination. That existence generally includes some implicit assumptions at the very least (Wuthnow, 1994: 53).

3.4 Types of Paradigms

There are two distinct types of paradigms identified by Kuhn in his book "The Structure of Scientific Revolutions;" these are the 'exemplar' and the 'disciplinary matrix.' Both of these types are related, given the level of development of disciplines or sub-disciplines, or communities involved; the exemplar is typically indicative of the beginning phases of scientific activity while the disciplinary matrix refers to a much more developed and articulated model for understanding and interpreting data. The paradigmatic structuring of religious groups and institutions, as well as how paradigmatic frameworks develop and maintain their authority within social groups will be addressed in the amalgamation of Kuhn's paradigmatic model and Weber's ideal types of legitimate authority in chapter four.

The exemplar paradigm is short for 'exemplary achievement' and makes reference to "a concrete achievement or model from which initiates are taught" (Preston, 2008: 23). This paradigm operates in accordance with two essential social factors: the "achievement" made through the use of a paradigm created by an individual or group is "sufficiently unprecedented to attract an enduring group of adherents away from competing modes of scientific activity" and also "sufficiently open-ended to leave all sort of problems for the redefined group of practitioners to resolve" (Kuhn, 1970: 10). It is this situation that allows, what Kuhn refers to as "normal science," the activity of puzzle-

solving wherein scientists assume that the scientific community knows what the world is like (Kuhn, 1970: 5; Preston, 2008: 32) as a paradigm presents a scientific community with a range of problems, problem-solutions, and methods to determine both (Kuhn, 1970: 10).

Since paradigms do not need to be completely successful interpreting all aspects of reality and experimental results, and none of them ever are (ibid: 17-18), the exemplar is based upon an implicit promise rather than actual results due to how it is successful with only selected and still incomplete examples (ibid: 23-24). The 'promise' of a paradigm is in no way rationally justifiable and given the existence of former paradigms, the 'converts' to the new paradigm will only proceed to articulate and test this new paradigm based upon their own faith in it (Kuhn, 1970: 158; Medawar, 1984: 14).

The second type of paradigm, the disciplinary matrix, is what exemplars develop into if they support the existence of normal scientific activity for a significant period of time. It refers to "a larger, more encompassing cognitive structure, 'the entire constellation of beliefs, values, techniques and so on shared by the members of a given [scientific] community'" (Preston, 2008: 23). This type of paradigmatic structure does not develop until an exemplar has attracted a sufficient following where a socially recognized discipline, sub-discipline, or community develops around it (Kuhn, 1970: 182); it is also premised more upon the articulation of already recognized and ordered elements rather than being 'open-ended' to any great degree (ibid: 182). It is at this stage, where scientific knowledge and methods are institutionalized and the paradigm

has been well articulated, that the "tradition-bound activity of normal science" can take over (ibid: 6).

It is important to note that different scientists working within the same disciplines need not share the same interpretations of paradigms. While the overarching exemplar or disciplinary matrix remains the same and guides research in a given discipline, differing interpretations of the paradigm can cause a "proliferation of versions" to develop (Preston, 2008: 25). This situation can occur when many differing lines of research are explored in an attempt to solve problems which the members of a discipline, sub-discipline, or community recognize as being acute, but which have remained resistant to investigation or solution utilizing normative or standard interpretations of the paradigm; this situation constitutes what Kuhn refers to as "extraordinary science" (Kuhn, 1970: 82-83).

During a period of extraordinary science, new and seemingly promising areas of research can open up within a given discipline and lead to the development of sub-disciplines and fringe-scientific work - the structure of which is recognizable as paradigms within paradigms. Multiple paradigms can therefore exist within a single scientific disciplinary area, but it is rare for more than one disciplinary matrix to exist within a scientific discipline at the same time. This would be due to how disciplinary matrixes are much more articulated and defined than exemplars and could therefore recognizably contradict or be incompatible with another matrix in the same discipline. More often, it would seem that scientific communities can recognize multiple exemplars within the paradigmatic framework provided by a single disciplinary matrix (Preston, 2008: 45).

Kuhn identifies four differing levels of successive paradigmatic frameworks, each representing a particular scientific 'field,' that must all be agreed upon by a community of scientists before it can be stated that they all share common paradigms (Preston, 2008: 38). The largest shared paradigm that Kuhn identified was shared among all natural scientists - aspects of which are still being articulated (Haught, 2006: 5; Scott, 2004: 50, 79). The next paradigm references the disciplinary professions within the natural sciences (i.e. physicists, chemists, biologists, etc.). Following this was the sub-disciplinary specializations within those disciplines (i.e. solid-state physicists, radio astronomers, etc.). And lastly, there are the small communities of scientists, usually consisting of around one-hundred members, who all study similar phenomena, often referencing each other's citation data. These scientists, however, often do not content themselves with only a single shared paradigm and they often belong to several such groupings (Preston, 2008: 38).

3.5 The Interrelationship of Facts, Theories, Anomalies, Discovery, and Creation

Ontological and epistemological understandings utilized within fields that are recognized as being "scientific" can be demonstrated to exist due to both logical necessity and the historical shifts or "revolutions" that Kuhn describes. The limitation(s) imposed upon reality in the axiomatic assumptions that the paradigm provides does not allow for any distinction to be made between fact and theory, as well as discovery and creation (Kuhn, 1970: 7, 24, 52). Facts are only identifiable given the systematic structuring of knowledge created by the utilization of theories and new discoveries concerning phenomena and situations are only understood through the utilization of theoretical models which must first be created by individuals, groups, and communities

a priori. These points are often justified utilizing The Law of Conservation of

Information, which states that "no process of logical reasoning...can enlarge the

information content of the axioms and premises or observation statements from which it

proceeds" (Medawar, 1984: 79). This means that - while paradigms allow for the

coherence among theories within a scientific field, the existence of facts, and the

potential creation of new theories and understandings - actual discovery, while being

recognized as existing, can only ever be the logical articulation of information allowable

within the paradigmatic restraints of the field in question. In essence, any form of

knowledge production must first create a reality premised upon untestable metaphysical

assumptions and then necessarily restrict all knowledge about that reality to the

imposed constraints upon possible information that those axiomatic assumptions

dictate; in short, scientists construct a reality (Loewen, 2008: 72). Medawar and Kuhn

explain,

> There is an intrinsic, built-in limitation upon the growth of scientific
> understanding. It is not due to any cognitive incapacity. It is a logical
> limitation that turns on a 'Law of Conservation of Information' (Medawar,
> 1984: 59).
>
> Observation and experience can and must drastically restrict the range of
> admissible scientific belief, else there would be no science. But they
> cannot alone determine a particular body of such belief. An apparently
> arbitrary element, compounded of personal and historical accident, is
> always a formative ingredient of the beliefs espoused by a given scientific
> community at a given time (Kuhn, 1970: 4).

It was this formulation of what 'discovery' means that led Kuhn to formulate two

of his most critical and controversial conceptualizations; his concept of 'anomalies' and

'scientific revolutions.' Normal scientific activity or 'normal science,' says Kuhn, does not

look for novelty or anomalous findings that cannot be predicted or interpreted properly

given the restrictions of the presently adopted paradigm, and when successful finds

none (Kuhn, 1970: 24, 52; Preston, 2008: 30). The 'puzzle-solving' activities of

scientists who perform normal scientific work is premised upon the assumption that

reality can be assumed to be composed of particular objects that operate in a very

particular manner, hence his utilization of a puzzle metaphor.

There is only one puzzle and all phenomena that exist are assumed to be

particular pieces that simply need to be interpreted correctly with the correct

paradigmatic framework or picture in mind. It is this assumption that justifies the very

narrow and specified areas of scientific research that are "essential to scientific

progress, since it forces scientists to investigate a limited range of phenomena in a

depth and detail that would be impossible without it" (Preston, 2008: 30). However,

when novelty is found and cannot be accounted for due to how it either exists counter to

paradigm-induced expectations, or cannot be properly interpreted through the utilization

of the predominant paradigm, then an anomaly can be recognized, a slow process that

only occurs over time and with great difficulty. Kuhn explains,

> In science...novelty emerges only with difficulty, manifested by resistance,
> against a background provided by expectation. Initially, only the
> anticipated and usual are experienced even under circumstances where
> anomaly is later to be observed. Further acquaintance, however, does
> result in awareness of something wrong or does relate the effect to
> something that has gone wrong before. That awareness of anomaly
> opens a period in which conceptual categories are adjusted until the
> initially anomalous has become anticipated (Kuhn, 1970: 64).

The recognition of 'anomalies' is central to Kuhn's paradigmatic epistemology.

An anomaly is an occurrence where, throughout the course of normal scientific 'puzzle-

solving' activities, there is an eventual recognition that "nature has somehow violated

the paradigm-induced expectations that govern normal science" (ibid: 52-53). The three possible reactions to the recognition of an anomaly are for scientists to adjust their paradigms to account for and explain the anomaly, to ignore the anomaly, or to find different paradigms that explain the anomaly, either by creating a new paradigm or utilizing already existing paradigms. The utilization of different paradigms in a scientific field turns the anomaly into a counter-instance of the old paradigm, interpreting it as evidence against the old paradigmatic framework. It is only after the anomaly is no longer an anomaly but is instead an explained and expected phenomenon that scientific discovery occurs (Kuhn, 1970: 84); discoveries are therefore processes rather than events "recognizing not just that something is but also what it is" (Preston, 2008: 41, 42-43). It is in this manner that scientific facts and theories are discovered, rejected, and changed.

Paradigms are inevitably changed and adjusted over time to ensure as close a fit as possible with the results of experimentation and new theoretical constructions (Kuhn, 1970: 24), but a scientific community does not actually change one paradigm for another in a given field unless a 'scientific revolution' occurs. These world-changing and perception-shattering events are the result of what Kuhn labels 'crisis,' which occurs when individuals and groups of scientists begin to decide that the present paradigm is failing to account for the experimental results obtained through normal scientific research. In other words, more and more anomalies are recognized as existing within the predominant paradigm and scientific communities are no longer able simply to dismiss these occurrences due to how they are continually being recognized as influencing the accepted avenues of normal scientific research (Preston, 2008: 46).

Due to the insulation of scientific investigation, external influences such as political or religious conditions can influence when the possibility of crisis is recognized and when it actually occurs, but external influences cannot dictate the conclusion of crisis itself. That determination is dependent upon the interpretations of the community of scientists that is utilizing a common paradigm in their research (ibid).

3.6 Scientific Revolutions

The perpetuation of crisis has several important implications for Kuhn's epistemology; if a paradigm is unable to rid itself of acute anomalies then a scientific revolution can occur. As the prevailing paradigm in a given scientific field fails to predict or explain a growing number of anomalies several developments occur in succession: first, more and more interpretations of the paradigm are utilized to develop new approaches and theories to explain the anomalies. Second, if the 'proliferation of versions' of a paradigm fails to account for acute anomalies, then alternative paradigms are either created or pre-existing ones are utilized in order to reinterpret and thereby attempt to eliminate those acute anomalies. And thirdly, many of the scientists performing research in the particular field in crisis cease to utilize and teach the old paradigm and educate new scientists to utilize a different one; it is this event that Kuhn labelled a scientific revolution (Preston, 2008: 48-53).

Scientific revolutions, and the steps that lead up to them, are contingent upon the shared paradigmatic assumptions of the natural sciences. These events hinge upon one of the most fundamental axiomatic assumptions existing within the natural scientific paradigm; namely the assumption that the natural universe can only exist in one way (Preston, 2008: 45). This assumption allows for two unique properties of the natural

sciences to exist: it does not allow multiple disciplinary matrixes to exist within a natural scientific disciplinary field, and it makes the natural sciences, in principle, a unifying enterprise among all of its constituent parts (i.e. its disciplines, sub-disciplines, etc.). Therefore, while interpretations of incompatibility can often be reached, interpretations of conflict should never be reached between natural scientific disciplines. Despite the incommensurable and/or incompatible paradigms and theories being utilized at the same time across different natural scientific fields (Dixon, 2008: 48), there is always the assumption that a mode of compatibility will eventually be achieved at a later date represented in the idea of "progress" within scientific activity (Kuhn, 1970: 206).

The assumption that the natural universe is physically comprehensible, existing in only one way, that it operates in a predominantly materialistic manner, and that the natural sciences are all creating valid knowledge of that universe, represent many of the paradigmatic assumptions shared across the natural sciences (Maxwell, 2009: 367-368). These assumptions, however, are not derived from the knowledge and testable theories that these sciences present us with. As the philosopher Nancy Cartwright has explained, what modern science has demonstrated is "not that we live in a world governed by a single systematic set of natural laws that apply at all times and in all places, but rather that we live in a 'dappled world' in which pockets of order emerge, or can be made to emerge, using a patchwork of different scientific theories (from physics, to biology, to economics), none of which is applicable across all domains" (Dixon, 2008: 48). This observation has been made by many eminent academics over the years as well (Maxwell, 2009: 370; Preston, 2008: 38).

The realist paradigmatic assumption necessitates that only one set of paradigmatic frameworks should hold sway over a field of scientific practitioners at any one time. Relativistic or social constructivist interpretations of scientific knowledge are avoided since the number of legitimated paradigms available within the natural sciences is restricted. This situation of having an overall paradigm governing all of the natural sciences maintains what Kuhn refers to as the "ramshackle structure" of natural scientific paradigms - where the myriad of metaphysical assumptions about the universe held within the natural science paradigm act like a glue to keep the structure seeming somewhat stable. It also necessitates the rejection of any scientific paradigm to entail the acceptance of an alternative paradigm to take its place; to reject the predominant paradigm without adopting another is to reject science itself (Kuhn, 1970: 77, 79).

A scientific revolution is a process where the paradigmatic structure of a given scientific field is rejected and another takes its place. It references a change in the following of a given paradigmatic framework by scientists who comprise different scientific communities and they can theoretically occur at any of the four levels of scientific fields that Kuhn discusses (natural science, natural scientific disciplines, sub-disciplines, and communities of scientists), however a scientific revolution at the level of the natural scientific paradigm itself is very unlikely since there are very few criteria that compose this paradigm (i.e. the existence of an intelligible and lawful universe, methodological naturalism/materialism) and it is unlikely as well that such abstract ontological and epistemological assumptions could ever be challenged by experimental results that depend upon them to exist in the first place.

Individual scientists can undergo 'conversions' where they change their worldview to accommodate the new paradigmatic way of understanding reality - however, the vast majority of scientists do not convert. This does not appear to be due to any special circumstances existing between scientists and their paradigms, but instead appears to be indicative of how 'dogmatically' loyal people in general are to their accepted worldviews. The sociologist Greg Loewen explains, "worldviews that depart radically from what we are used to...will have to fight for every step taken. The most poignant and shameful example of how we cannot afford to take seriously alternative worldviews concerns the reality...of the mentally ill (Loewen, 2008: 112-113).

Scientists who continue to remain 'dogmatically' loyal to the old paradigm must either lose their academic influence, retire, or die and be replaced by new scientists who subscribe to the new paradigm for a scientific revolution to occur. However, almost all scientists choose not to convert to a new paradigm (Preston, 2008: 84), making scientific revolutions often a very long process potentially involving decades of change before the majority of scientists within a particular scientific field have been educated in the new paradigmatic understanding of their field. This is why scientific revolutions are fundamentally a process of social change - much more than of individual change (Kuhn, 1970: 77, 150-151; Nielson, 1990: 21; Preston, 2008: 86).

The term 'revolution' is utilized to draw parallels between scientific and political revolutions. Within both, there is an understanding of inadequacy concerning an institution, the manner in which it is solving problems that the community recognizes as being acute, and therefore the community itself works to change the institution in ways that are currently prohibited (Preston, 2008: 52-53). There is also no manner by which

to rationally convince people to convert allegiance to another paradigm. Techniques of persuasion rather than rational arguments must be utilized by individuals to gain converts to an incompatible or incommensurable mode of community life (ibid).

It is for these reasons that - what is commonly referred to as 'The Scientific Revolution' - does not meet the criteria of a scientific revolution within Kuhn's epistemology. According to both Brooke and Shapin, while there were several important scientific revolutions in the hundred and fifty years following the publication of Copernicus's heliocentric astronomy in 1543, there was no overarching revolution across the fields that came to be known as scientific (Brooke, 1991: 52-53, Shapin, 1996: 3). While a change eventually occurred where natural philosophy, as an academic discipline, was replaced by what is now referred to as 'science' in the early decades of the 19th century; it is not the case that the new academic discipline of science differentiated itself from either religious paradigms or religious activities until the introduction of methodological naturalism/materialism by T. H. Huxley in the late 19th century (Brooke, 1991: 58; Haught, 2006: 5; Lennox, 2007: 110; Numbers, 2009: 15-16). As Brooke explains,

> We speak of a revolution; and yet this intellectual transformation took so long to accomplish that there is no straightforward parallel with a political revolution. During the hundred fifty years in question, there was so great a diversity of views about nature that, on closer inspection, it becomes difficult to achieve a succinct characterization (Brooke, 1991: 53).

These revolutions are started by certain individuals who both utilize a different paradigmatic framework to interpret reality and manage to establish a following where others utilize their new paradigmatic framework as well. These individuals, according to Kuhn, are often young and/or new to the scientific field that they are working to change

(Kuhn, 1970: 90). This makes them less attached to the dominant paradigm since they have not been indoctrinated into utilizing it for a significant length of time. They are therefore still able to conceptualize the dominant paradigm as merely one perspective among many instead of simply reality itself (Preston, 2008: 51).

The changes brought about by a change in paradigmatic following represents a complete change in the reality that scientists study. The ontology, epistemology, theories, facts, and standards regarding the scientific study of a given field are all significantly changed (Kuhn, 1970: 109; Preston, 2008: 56). Depending upon the interpretation of the individuals or groups involved with comparing the old and the new paradigms, they can be interpreted as being either incompatible or incommensurable with each other depending upon what metaphysical framework is utilized to compare them, but logic dictates that they cannot both be conceptualized as being indicative of reality itself at the same time since, as was explained earlier, within the natural scientific paradigm, reality can only exist one way. Preston and Kuhn elaborate,

> While [Kuhn] always thought that the mature natural sciences constitute our best-developed forms of knowledge, he never subscribed to the usual idea that they develop by coming ever closer to the truth, and he did his best to challenge scientism, the belief that science is a general intellectual panacea (Preston, 2008: 12).
>
> Since new paradigms are born from old ones, they ordinarily incorporate much of the vocabulary and apparatus, both conceptual and manipulative, that the traditional paradigm had previously employed. But they seldom employ these borrowed elements in quite the traditional way. Within the new paradigm, old terms concepts, and experiments fall into new relationships one with the other. The inevitable result is what we must call, though the term is not quite right, a misunderstanding between the two competing schools (Kuhn, 1970: 149).

3.7 Kuhn's Critical Realist Approach

There is, I think, no theory-independent way to reconstruct phrases like 'really there'; the notion of a match between the ontology of a theory and its 'real' counterpart in nature now seems to me illusive in principle. Besides, as a historian, I am impressed with the implausibility of the view (Kuhn, 1970: 206).

Kuhnian paradigmatic frameworks do not necessitate a relativist ontological understanding due to the existence of anomalies, counterinstances, and scientific revolutions; instead Kuhn's epistemology suggests a critical realist perspective wherein a natural world does exist but is not directly knowable (Preston, 2008: 73-74). According to Alexander Bird's interpretation of Kuhn's epistemology, "the only satisfactory explanation of the origin of anomalies is that the world is not exactly as our theories say it is. If error or ignorance can be shared by all of us, then there must be a way things are that is 'beyond' theory" (Preston, 2008: 99-100). This matches well the definition of critical realism, an ontological position which "affirms that objects exist independently of our thoughts about them (realism) and asserts that human knowledge of reality is a progressive dialogue between knower and known (critical) (Peterson, 2009: 73).

The very existence of anomalies suggests the existence of an external reality given the two possible reasons for their existence. The first is that scientists are horrible social constructivists who are simply incapable, even within the structures of replicability and peer review, to remain logically consistent in their deductive interpretation of phenomena from their fields' paradigmatic assumptions; however, such an assumption appears to be highly unlikely. The second explanation, which is indicative of Bird's interpretation, would situate all knowledge and perception within the realm of social

constructivism where meaning, understandings, and all other topics involving language

and communication would derive from the interactions between individuals instead of

from material sources themselves; this suggests that anomalies are the direct result of a

theoretical framework being unable to properly match the structures of reality itself.

Therefore, Kuhnian paradigmatic frameworks can be understood to necessitate the

ontological stance of critical realism rather than relativism in which scientists create

"research worlds" that are understood given the paradigmatic structures utilized by the

scientists in their study of it (Preston, 2008: 73-74).

CHAPTER 4: MAX WEBER'S IDEAL TYPES OF LEGITIMATE AUTHORITY AND THEIR RELATIONSHIP WITH KUHN'S PARADIGMATIC EPISTEMOLOGY

4.1 Three Ideal Types of Legitimate Authority

> At times science seems to act like a religion: it has its high priests, its truths, symbols, and shibboleths, its body of received wisdom, and its sects. It claims to encourage dissent while sometimes actually suppressing it (Thompson, 2009: 6).

Max Weber's analysis of ideal types of legitimate authority when combined with

Kuhn's paradigmatic structuring of both scientific and religious activity, allows for a

much more articulated understanding of the relevant issues involved in the instances of

conflicting interpretations between scientific and religious ways of understanding reality.

Many theologians and scientists have recognized how useful Kuhn's epistemology is to

understand the structure and activity of religious institutions and communities as well as

scientific ones (Barbour, 2000: 26; Shedinger, 2000: 459-466). A merger of Kuhn's

epistemology with Weber's typology of legitimate authority, which has been utilized to

study the development of religions (Weber, 1993), provides a useful theoretical

framework for the analysis of both scientific and religious understandings and practices due to its ability to address the ambiguity of the both science and religion, as well as providing a consistent structural model of development that can account for all of the types of interactions between science and religion found within our meta-typology. At the same time, it grounds the discussion of paradigm formation, maintenance or adjustment, and paradigm revolutions, in the social organizations and authoritative structures that exist within them.

Weber's three ideal-typical forms of legitimate authority that are in various ways part of all social organizations are: charismatic, traditional, and rational-legal. Of paramount importance is the concept of charismatic authority, which blends well with Kuhn's very limited and incomplete discussion of the young and inexperienced individuals who manage to formulate exemplars and convert other scientists in their discipline to a new paradigmatic form of understanding reality. These charismatic individuals often have a key role to play in both the creation and the development of paradigmatic frameworks. The other forms of authority, 'traditional' and 'rational-legal,' also allow for a much more articulated understanding of the social forces and institutional structures involved with both the exemplar and disciplinary matrix forms of paradigm development. A synthesis of both theories regarding these paradigmatic developments leads to a much greater articulation of paradigmatic forms; for example, exemplars consist mostly of charismatic and traditional forms of authority, while the later development of disciplinary matrixes is likely to consist mostly of either traditional or rational-legal forms of authority, especially over time due to the inevitable death of the charismatic leader or founder of the paradigm.

4.2 Charismatic Individuals

Charismatic authority, as understood in Weber's typology, is likely to play a primary role in the process of establishing the social support necessary to establish both scientific and religious paradigms in the first place. Weber defines charismatic authority as "resting on devotion to the specific and exceptional sanctity, heroism or exemplary character of an individual person, and of the normative patterns of order revealed or ordained by him" (Weber, 1947: 328). Charisma is not an instrumentally rational quality of an individual since it is this aspect attributed to them that sets them apart from "ordinary men" and is "treated as endowed with supernatural, superhuman, or at least specifically exceptional powers or qualities" (ibid: 358). However, it is recognizable as a form of legitimate authority by virtue of the effects it has upon others to the extent that the individual who is recognized as being charismatic is treated as a leader by a group or community (ibid: 359).

These charismatic individuals in Kuhn's epistemology, who are responsible for the occurrence of paradigm revolutions, are only vaguely described. They are typically young and/or new to a given scientific discipline, they interpret the predominant paradigm as being in a state of crisis, manage to convince others that it is so, and they manage to convert others to a new paradigm (Weber, 1993: 2, 46, 54-55, 58-59). These individuals are faced with the difficult task of either creating or utilizing an alternative paradigm to account for some of the acute anomalies recognized by the old paradigm while being able simultaneously to account for as much of the same phenomena as possible. This form of argumentation must remove much of the promise that the old paradigm has in the minds of its former adherents by convincing them that

the anomalies observed under the old paradigm should actually be interpreted as counter-instances instead. This form of argumentation is rationally impossible since the old paradigm adherents must convert or have "faith" in the alternative paradigmatic framework in order for the arguments to be logically compelling (Kuhn, 1970: 151, 158).

Kuhn explains how this work of converting others to a new way of understanding and observing the universe cannot be done rationally since the two paradigms, by virtue of being two different paradigms, are either incompatible or incommensurable with one another. Consequently, there is an "incompleteness of logical contact" between the two (Kuhn, 1970: 11). Paradigms, being largely unarticulated structures affecting beliefs, knowledge, and perceptions, cannot be integrated with each other as they presently exist. The axiomatic assumptions, theories, methods, and standards for recognizing both problems and possible problem-solutions are all radically different. Consequently, "to the extent...that two...schools disagree about what is a problem and what a solution, they will inevitably talk through each other when debating the relative merits of their respective paradigms" (Kuhn, 1970: 109-110). Due to the inevitable absence of points of logical contact when comparing two paradigmatic frameworks, there is no necessary logical or rational procedure by which to compare and contrast the two. So in order for the arguments across paradigmatic divides to be rational instead of merely persuasive, one must first "step into the circle" and adopt the paradigm as their own (ibid: 94).

Thus, a conversion of people to a new paradigmatic framework requires some inherent quality of the individual's character that makes their arguments compelling and persuasive without necessarily being rational. Kuhn explains that the mediating circumstance that allows for possible individual conversions to a new paradigm, the

67

interpretation of crisis, is relative to each individual (ibid: 80). This circumstance, however, is a necessary, but not a sufficient criterion, for conversion because paradigmatic dogmatism can prevent the reinterpretation of anomalies into counter-instances even when the paradigm is recognized by other individuals as being in a state of crisis (Preston, 2008: 45). In other words, scientists or religious adherents can understand problems that their present paradigm has with interpreting reality without necessarily giving up on their present paradigm's ability to eventually interpret the anomalies found within its framework. The paradigmatic dogmatism that Kuhn describes actually prevents most people from ever converting to other paradigms (ibid: 84) since conversion experiences are rare. Charismatic qualities would therefore have to be extraordinary or representative of an exemplary character possessed by the individual who manages to convert others.

This charismatic authority is commensurable with Kuhn's concept of an exemplar but not with his concept of disciplinary matrix. An exemplar consists of a concrete achievement or model from which initiates are taught; it is open-ended and largely unarticulated. This fits well with the organizational model proposed by Weber regarding a predominance of charismatic authority. He explains how in this model, "there is no such thing as a definite sphere of authority and of competence, and no appropriation of official powers on the basis of social privileges" (Weber, 1947: 360). This exemplar/charismatic model would be able to account for those religions that simply represent a way of life, as well as the earliest developmental stages of a scientific paradigm, when the paradigms utilized remain largely unarticulated. This model, however, cannot remain stable (ibid: 364) as a result of various factors such as the

organizational requirements of managing a large organization, competition from other social groups, and perceived threats from other communities, groups, or institutions; or the most obvious reason, the charismatic leader dying or physically/mentally being unable to lead and/or teach anymore (Preston, 2008: 37; Ruthven, 2007: 11; Weber, 1947: 370; Wuthnow, 1994: 71).

A disciplinary matrix is not commensurable with a predominance of charismatic authority. A larger, more articulated and identifiable set of beliefs, values, techniques, standards, etc. represents a definite sphere of authority, structures and limitations that paradigms governed by charismatic authority do not operate within. "There is no system of formal rules, of abstract legal principles, and hence no process of judicial decision oriented to [charismatic forms of organization]" (Weber, 1947: 361). Once a disciplinary matrix has been formed, a well-articulated, but never wholly articulated, paradigm is taught either as a set of practices or explicitly as concepts and theoretical interpretations. The social acceptance of the paradigm is represented by increases in initiates, but the increasingly articulated boundaries coupled with the increase of more rational, bureaucratic, and either traditional or rational-legal forms of authority cannot be identified as being representative of predominantly charismatic authority.

Charismatic authority must also influence the structuring of 'extraordinary science' and the creation of religious sects that develop during the recognition of crisis within scientific or religious paradigms. Where community agreement is dissolving and paradigmatic boundaries are becoming blurred, authority for each new version of the paradigm must rest predominantly in the persons of charismatic individuals for it to have a communal following at all (Kuhn, 1970: 83-84; Preston, 2008: 47); it is for this reason

69

that Weber identifies charisma as a "specifically revolutionary force" that may "result in a radical alteration of the central system of attitudes and directions of action with a completely new orientation of all attitudes toward the different problems and structures of the 'world'" (Weber, 1947: 362, 363).

4.3 Traditional and Rational-Legal Roles

Traditional and rational-legal types of legitimate authority can result from the 'routinization' of charismatic authority. Through this process authority that was once invested entirely within the character of an individual or set of individuals, is transformed into authority invested in particular social roles and/or a bureaucratic system of rules and procedures. Examples of routinization of charismatic authority represent an increasing articulation of paradigmatic structures adhered to by a group, community, or institution of individuals (Weber, 1947: 364). Routinization represents a shift from a charismatic/exemplar paradigm to either a traditional/exemplar, traditional/disciplinary matrix, or a rational-legal/disciplinary matrix paradigm. These routinizations are recognizable both through differing amounts of paradigm articulation, restrictions upon the legitimate authority held by individuals within the paradigmatic framework, and changes in the loyalty of the adherents of the paradigm. Following charismatic routinization, the paradigmatic authority becomes derived from the loyalty that members have either to the paradigmatic structuring itself, or to the individuals who have taken roles within the paradigm, in contrast to the charismatic authority held by individual(s) who created and/or converted others to it.

The authority of the social roles obtained by particular individuals within established paradigms that have become routinized are premised upon either traditional

or rational-legal structures or a mixture of the two (Weber, 1947: 364). Traditional

structures and roles are based upon "an established belief in the sanctity of immemorial

traditions and the legitimacy of the status of those exercising authority under them" (ibid:

328). Rational-legal roles and structures, on the other hand, are based on "a belief in

the 'legality' of patterns of normative rules and the right of those elevated to authority

under such rules to issue commands" (ibid). The key factors here are the belief in the

'sanctity of immemorial traditions' for traditional authority and the 'belief in the legality' of

patterns of normative rules' for rational-legal authority since it is the communal loyalty or

adherence to these social structures that, in turn, provide the roles obtained within that

network of social relations with authority.

Both of these types of authority, traditional and rational-legal, therefore seem to

be derived from individual and group loyalty to their shared paradigm; however, such is

not the case. While, in the case of rational-legal authority, the authority of the paradigm

rests with the individual and group loyalty to the routinized and necessarily well-

articulated paradigm itself; in the case of traditional authority loyalty is owed to the

person "who occupies the traditionally sanctioned position of authority and who is

(within its sphere) bound by tradition" (Weber, 1947: 328).

This distinction between the group loyalty towards an individual in the case of

traditional authority and the group loyalty towards a legally established impersonal order

in the case of rational-legal authority, has significant consequences for these forms of

authority as related to Kuhn's paradigmatic epistemology. An impersonal order that is

able to organize groups in an intelligible and rational manner while maintaining the

group loyalty would have to be very well articulated and even adjusted from time to

time. Consequently, such an authoritative structure could not be indicative of an exemplar and would have to develop into a disciplinary matrix. Traditional authority, on the other hand, would not necessitate a very well-articulated or routinized paradigm because authority is vested in a person. The individual who has authority due to the group loyalty vested within him or her would be able to control the social group, community, or institution without need of a well articulated paradigm. Such a paradigm, however, must be sufficiently articulated so as to be able to recognize group, communal, and institutional forms as traditional and sanctified, to create and maintain social roles that individuals can occupy, and functional enough so as to allow those in positions of authority within that traditional paradigm to maintain the loyalty of the group adherents; keeping in mind that individuals who occupy traditional roles are restricted by the traditional paradigm that provides those roles for them (Weber, 1947: 330).

This key distinction allows for the identification of paradigmatic types in relation to ideal types of authority - keeping in mind that these ideal types of authority have not usually been found historically in their pure forms (ibid: 329). Where traditional authority can be representative of both exemplar and disciplinary matrixes, rational-legal authority can only be representative of a disciplinary matrix. Traditional authority, which can be based upon either articulated or largely unarticulated traditions, need not be reducible to rules or well-articulated structures, and can remain either open-ended or dogmatically closed. Such is not the case with rational-legal authority, however, which must be based upon well-articulated rules and must have a specified sphere of competence for the individuals who have roles within it (ibid: 330). It is thereby necessary that rational-legal authority can only exist in a disciplinary matrix due to the need for the recognition

of an identifiable and stable impersonal order, whereas traditional authority can be both open-ended or closed, bureaucratic and rule-based, and very individualistic in terms of authoritative structuring (ibid 342, 356).

4.4 How to Determine Types of Scientific and/or Religious Interactions

Given a combined Kuhnian and Weberian analysis, as well as the critical historical analysis presented by writers such as Brooke, Lennox, and Dixon, the relationships between scientific and religious paradigms adhered to by particular groups, communities or institutions can potentially be interpreted as an issue of compatibility, incompatibility, incommensurability, integration, or conflict at the same time depending upon which individuals and/or groups are doing the interpreting and what theoretical or paradigmatic framework they are utilizing. The paradigmatic frameworks that structure both scientific and religious organizational understandings and practices both historically and presently do so by way of the interpretations of them by authoritative individuals within those social organizations. Of course, such interpretations need not necessarily come from the institutionally authoritative individuals; in the case of many religious studies, however, it has been demonstrated that most members of a religious group remain unaware of what is actually being taught and discussed within their institutions, so interpretations of scientific and religious interactions by non-authoritative individuals from religious organizations seem unlikely (Loewen, 2008: 76). Consequently, it would appear that it is the relationship between paradigmatic content and its interpretation or modification by authoritative individuals that causes the group, community, or institutional recognition of differing types of inter-paradigm interactions that we have adopted in our meta-typology.

73

Both scientific and religious knowledge has historically and presently been premised upon paradigms that contain axiomatic assumptions, aesthetics, and practices that meet the available criteria of being religious but often not scientific given the epistemological restrictions required of the natural sciences (Brooke, 1991: 13, 76; Gingerich, 2006: 75; Haught, 2006: 5; Miller, 1999: 194-195). Differing paradigmatic assumptions, aesthetics, and practices have greatly affected the development of scientific thought throughout its history. Many of these, as previously discussed, came from religious paradigms, but they are not indicative of any single particular religious paradigm as historically, many very influential scientific individuals, who were also religiously oriented, often did not adopt traditional or dogmatic interpretations of religious paradigms (Brooke, 1991: 44-45). Specific religious or scientific paradigms can thereby often match the criteria necessary for an interpretation of integration. The ambiguity of the family resemblances available for the determination of scientific and religious paradigms emphasizes the importance of authoritative interpretations made within differing social organizations to determine which type of interpretation will be adopted by the members of that organization to understand other paradigmatic frameworks. The complexity of comparing scientific and/or religious paradigmatic frameworks and the necessary recognition of authoritative individuals interpreting or changing those frameworks is highlighted by Brooks;

> The existence of a political dimension to many of the debates in which scientific and religious interests were involved means that to abstract both the 'science' and the 'religion' and then try to establish their mutual relationship can be highly artificial. Indeed, it is tempting to say that we should be more concerned with the use to which scientific and religious ideas have been put in different societies than with some notional relationship between them (Brooke, 1991: 10-11).

The utilization of family resemblances to differentiate scientific and religious

understandings and practices from one another, while providing a useful analytical basis

for understanding the types of interactions found within our meta-typology, does not

provide a means by which to delimit them from one another. Many scientific and

religious understandings have been merged over time to create our modern-day

scientific and religious worldviews. The natural scientific paradigm's most basic

axiomatic assumption is a religious assumption that reality is physically comprehensible

and governed by immutable laws due to its creation by an intelligent being (Barbour,

2000: 23, 171; Brooke, 1991: 19; Lennox, 2007: 110; Maxwell, 2009: 367-368). At a

more subjective and unarticulated level of paradigmatic use, the 'quasi-aesthetic'

considerations of theory found in scientific paradigmatic frameworks such as simplicity,

accuracy, consistency, coherence, comprehensiveness, fruitfulness, unity, symmetry,

suitability, neatness, and beauty (Barbour, 2000: 11, 40, 52; Unwin, 2003: 16-19;

Preston, 2008: 39) often derive from that same metaphysical assumption. These quasi-

aesthetic aspects of paradigmatic teachings and practice are even more important to

scientific theorizing than falsification by empirical means because they determine theory

choice whereas falsification and empiricism are reliant upon theories themselves. The

determination and use of these quasi-aesthetics, for all their importance in scientific and

religious activity, are often unarticulated because of their subjective and non-rational

nature; often they are adopted or utilized in relation to the religious beliefs of scientists

(Brooke, 1991: 18, 28; Kuhn, 1970: 77; Maxwell, 2009: 367-368; Unwin, 2006: 17-18).

Brooke elaborates,

> Recent work in the philosophy and sociology of science has emphasized
> that experimental results are rarely adequate for making a definitive

choice between competing theories... Certain problems have long been acknowledged even in popular accounts of scientific practice where emphasis is placed on the role of aesthetic criteria in theory selection (Brooke, 1991: 28).

The determination of any of types of paradigmatic relation when scientific and religious paradigms are interpreted as somehow interacting with one another appears to be based upon authoritative interpretations since none of these interpretations is necessary given the lack of points of logical contact among the different paradigmatic frameworks found within both scientific and religious practice. Given the inability of modern-day philosophers and critical historians to clearly articulate any overarching paradigms for either science or religion, or the inability of those same philosophers or historians to distinguish scientific from religious understandings and practice; I suggest that an integrationist interpretation is most representative of the actual paradigmatic frameworks utilized by both scientific and religious organizations. Not that science and religion have been integrated (suggesting that they were at one time separate), but that they have always utilized elements of both types of understandings and practices in a dynamic synthesis (Brooke, 1991: 58).

The ambiguity present within individual scientific and religious paradigmatic frameworks also has a dramatic part to play when searching for the reasons for the adoption of differing interpretations from our meta-typology. There are several indicators that have previously been discussed which assist in these differentiations between paradigms. However, these types of indicators such as differences in axiomatic assumptions, language, and level of analysis are not necessary indicators of any particular interpretation. For example, if an authoritative individual representing

either a scientific or religious organization interprets their paradigm as being equitable directly with reality itself and reality as only existing in one way (exclusive realism); then all differing paradigms are inevitably going to be interpreted as being incompatible instead of incommensurable. This is due to how any paradigm that is interpreted as being equitable with reality is understood to be reality, not simply one interpretation of it. When coupled with the paradigmatic assumption that reality can only be interpreted in a single manner, all other paradigms are interpreted as erroneous instead of simply incompatible; this can easily lead to interpretations of conflict.

Paradigms that do not share the exclusive realist assumption allow for other interpretations of paradigmatic interaction such as incompatible, incommensurable or integrationist. In a situation of incommensurable paradigmatic perspectives, both can potentially be correct interpretations of reality at the same time despite differences between the two because neither need be incorrect or erroneous. The interpretation of integration, on the other hand, depends almost entirely upon one of two possible circumstances occurring; first, either a historical interpretation of paradigm development leads to the conclusion that two paradigms developed from a single one or possibly are still operating within a single, overarching paradigm. Secondly, a new paradigm can be created and utilized in order to reinterpret two pre-existing paradigms. However individuals and groups may be unable or unwilling to accept that external influences affected their own paradigm development; especially if the authority derived from their paradigm is reliant upon divine revelation. This is due to how external social circumstances that influence paradigmatic development could be interpreted as an unreliable or invalid means by which the divine can communicate with or inspire people.

Given the myriad of differing interpretations of paradigmatic interactions, the interpretation of paradigmatic relationships by individuals in positions of authority is as fundamentally important to the determination of types of interactions as the existence and composition of the paradigms themselves. The importance of a legitimate authoritative interpretation to determine what type of interaction is occurring between scientific and/or religious paradigms and the type of legitimate authority that can interpret these interactions becomes the axial to the discussion. The most dynamic and influential form of legitimate authority, and thereby the easiest by which to determine legitimate interpretations of paradigmatic interaction, is charismatic authority. Since the entire paradigmatic structure is utilized and adhered to by virtue of the followers loyalty to the charismatic individual, he or she alone is able to arbitrarily determine what an authoritative interpretation of paradigmatic interaction would be, even if such an interpretation necessitates a paradigmatic revolution since the paradigmatic framework derives its legitimacy from the charismatic individual (Weber, 1947: 328).

The next most likely form of legitimate authority which could determine paradigmatic interactions would be traditional authority. Since the follower's loyalty is given to the person who has filled the traditionally established role, they alone are capable of determining paradigmatic interactions so long as their activities and interpretations are in congruence with their specific role and authoritative sphere within the traditional paradigm. Hence, the authoritative individual within a traditional authoritarian sphere is the only person who can interpret paradigmatic interactions but they cannot interpret the paradigm beyond their prescribed sphere of authority and they cannot, themselves, cause a paradigmatic revolution due to how they derive their

authority from their role within the pre-existing paradigmatic structure. If that structure becomes compromised in the minds of the paradigm's followers, the individual in the traditional role risks losing their legitimate authority.

Lastly, the most difficult form of legitimate authority to utilize and obtain an authoritative interpretation of paradigmatic interaction is rational-legal authority. This difficulty reflects how an individual utilizing this type of authority cannot, themselves, create an authoritative interpretation of paradigm interactions. There must be an acceptance among many individuals in the sense that the followers' loyalty is not given to people directly, but is instead given to the system of rules and procedures as a whole. Consequently, people in positions of authority within a rational-legal framework are responsible to others for the decisions that they make and their authoritative decisions can be changed by others immediately or at a later date (Weber, 1947: 328).

4.5 The Formation of Defined and Rational Boundaries and the Problem of Fundamentalism

A Kuhnian paradigmatic analysis provides a means by which both the ambiguity between scientific and religious boundaries and the occasional instances of well-articulated boundaries between particular scientific and religious paradigm-theories can be interpreted through a single epistemology. Within this framework, there is no rational distinction to be made between religious and scientific forms of knowing; however, religious sects, communities, and certain scientific disciplines, groups, and communities may come to adopt an interpretation of conflict with each other's understandings of reality. These conflicting interpretations occur through an interpretation of incompatibility with other paradigmatic frameworks, which could not occur without the

prior existence of at least one well-articulated paradigmatic framework between the two or more frameworks being compared.

Both Kuhn and Weber agree that well articulated rules, procedures, and theories can proliferate within given paradigmatic frameworks when a paradigm is perceived as being threatened; however, external forces such as political regimes, economic circumstances, bureaucratic organization, and the size of the paradigmatic following also can play an important part (Preston, 2008: 37; Ruthven, 2007: 11; Weber, 1947: 370; Wuthnow, 1994: 71). Paradigm articulation tends to occur when scientific or religious social organizations adopt particular interpretations of other paradigms and/or social and historical circumstances due to the influence of authoritative individuals. These interpretations mandate the paradigm adherents to derive more and more articulated rules, procedures, and dogma from their paradigmatic framework to defend their beliefs and understandings from the perceived threat(s). This situation creates a much more narrowed and closed paradigmatic framework than existed previously and allows for a much greater ability for individuals and groups to agree upon and communicate what exactly their paradigmatic understandings are (Ruthven, 2007: 12, 117). Weber explains,

> One of the decisive motives underlying all cases of the routinization of charisma is naturally the striving for security. This means legitimization, on the one hand, of positions of authority and social prestige, on the other hand, of the economic advantages enjoyed by the followers and sympathizers of the leader. Another important motive, however, lies in the objective necessity of adaptation of the patterns of order and of the organization of the administrative staff to the normal, everyday needs and conditions of carrying on administration (Weber, 1947: 370).

> The more highly developed the interdependence of different economic units in a monetary economy, the greater the pressure of the everyday needs of the followers of the charismatic movement becomes. The effect

of this is to strengthen the tendency to routinization, which is everywhere operative, and as a rule has rapidly won out. Charisma is a phenomenon typical of prophetic religious movements or of expansive political movements in their early stages. But as soon as the position of authority is well established, and above all as soon as control over large masses of people exists, it gives way to the forces of everyday routine (Weber, 1947: 370).

This process of paradigm articulation can lead to the most widely recognized reason for conflicting interpretations between scientific and religious paradigms; fundamentalism. This is a term that originated to reference a reactionary religious movement wherein many protestant leaders in several Western countries attempted to derive their religions 'fundamentals' and to preserve them in a social climate with increasingly liberal Christian denominations and the growth of the Higher Criticism tradition of theology (Ruthven, 2007: 7,11). Since then, it has come to reference other religious groups and a much wider range of phenomena such as extremism, sectarianism, doctrinarism, and ideological purism. However, it would seem that any reference to social movements outside of the sphere of religious activity makes the concept of fundamentalism analytically useless (Armstrong, 2000: xi, 22).

Within a Kuhnian theoretical framework, fundamentalism is an activity involving the articulation of a paradigm until a recognizable and defensible paradigm-theory exists. This articulated paradigmatic framework must be accurately defined or explained in terms of explicit assumptions, theories, limitations, statements and rules. This is done by way of limiting what types of interpretations are allowable regarding the existing paradigmatic framework and, consequently, a discrediting or a disallowing of alternative interpretations. This process occurs to maintain the social legitimacy of the structuring of a particular discipline, religious group, sect, or church by removing

possible ambiguity from the subject area and enabling authoritative individuals in those social groups to engage in apologetics against other versions or interpretations of their own paradigm or against other paradigmatic modes of knowledge production and dissemination. Consequently, the adherents of said paradigm possess an awareness of their own particular paradigm and are often defensive of it.

Malise Ruthven, a noted author and expert writer on Islam and fundamentalism, defines several differing forms of fundamentalism premised upon Wittgenstein's concept of family resemblances (Ruthven, 2007: 6-7). These categorizations include: scriptural inerracy, textual literalism, integralism, and collapsing myth into history, among others (ibid: 4, 40, 56). However, what is most important to remember regarding these differing categorizations of fundamentalist activity is that they represent specific interpretations of texts, experience, scientific findings, religious history, and almost every other sphere of human knowledge.

Similar to how the quasi-aesthetic considerations found within scientific activity have been shown to be more influential to theory choice than actual empirical results; it is the interpretations of individuals in authoritative positions that ultimately affect how religious and scientific communities or groups determine how to articulate their paradigms into definite paradigm-theories and, consequently, to interpret how differing paradigms relate with one another. This reliance upon the interpretations of authoritative individuals appears to be very important for group interpretations of, first, the paradigm supposedly coming under threat, and secondly, criteria by which to 'correctly' articulate the paradigmatic framework and by which to interpret paradigm interactions (Ruthven, 2007: 9). The Dalai Lama emphasises this point in his book

82

"Toward A True Kinship Of Faiths," stating that, "at its heart, fundamentalism is a reaction to a perceived threat to the integrity of one's own religious tradition" (Dalai Lama, 2010: 156). It is therefore important not only to gain a sense of how scientific or religious understandings and practices are structured and developed, but also to gain a sense of how these authoritative interpretations of incommensurability, compatibility, incompatibility, integration, or conflict develop. Ruthven elaborates this point by explaining how the interpretations of fundamentalists are not reliant upon necessary rational conclusions, or upon group consensus.

> In no tradition does one find a complete consensus about what the fundamentals of the faith really are. Fundamentalists are nothing if not selective about the texts they use and their mode of interpretation (Ruthven, 2007: 9).

This limitation of reality and the criteria of what counts as legitimate knowledge is an authoritative reaction to a plurality of worldviews and understandings (Ruthven, 2007: 23). The recognition of a plurality of worldviews and understandings can lead to the recognition of a shared community or group paradigm where none need have existed before because of lack of prior awareness of that paradigm due to its largely unarticulated boundaries (ibid: 10-11). For example, isolated and supposedly religious tribal communities that may not often interact frequently with other social groups, can possess a shared paradigm of which they are unaware because of how their paradigm is taught, like the natural sciences, as a set of practices instead of explicitly as assumptions, theories, and rules.

A shared paradigm, due largely to the inability of many if not most adherents to articulate it, does not allow for a clear indication of what its 'fundamentals' are. As

stated earlier, shared paradigms are often largely unarticulated and are not necessarily

agreed upon. Due to multiple forms of interpretations of a given paradigm, a

proliferation of versions can develop as well as a situation of paradigms within

paradigms. Therefore the articulation of a paradigm into an explicit paradigm-theory or

a list of assumptions, rules, and dogmas is derived from an authoritative process of

interpretation wherein much of the paradigm is eliminated and alternative interpretations

of the paradigm are determined to be invalid. Ruthven explains how a pluralism of

paradigmatic understandings can lead to the development of fundamentalism;

> Religious pluralism is an inescapable feature of modernity. It implies choice, inviting the suspicion that there may be more than one path to salvation (perhaps even a non-religious path). The surge of fundamentalist movements, or movements of religious revitalization, we are witnessing in many parts of the world is a response to globalization and, more specifically, to the crises for believers that inevitably follows the recognition that there are ways of living and believing other than those deemed to have been decreed by one's own tradition's version of the deity (Ruthven, 2007: 23).

> In a broader context, tradition is simply what occurs unselfconsciously as part of the natural order of things, an unreflective or unconsidered...worldview...most people who live in a traditional culture do not know they are traditionalists. Tradition, in this sense, consists in not being aware that how one believes or behaves is traditional, because alternative ways of thinking or living are simply not taken into consideration (Ruthven, 2007: 10-11).

This process of limiting how reality is understood into fundamental criteria by

which to obtain a well-articulated worldview that can be explained, rationalized (within

its own paradigm), and communicated directly is necessarily premised upon criteria

present within a pre-existing paradigmatic framework but selectively chosen by

authoritative individuals within a scientific or religious community or group. Alfred

Schutz, an eminent sociologist, describes this process as a modification of the "purpose

at hand." According to Schutz, it is due to the authoritative individuals' biographically determined situation, which is their "history...previous experiences, organized in the habitual possessions of his stock of knowledge at hand, and as such [their] unique possession, given to [them] and to [them] alone" (Schutz, 1967: 9-10). It is this which determines that individual's 'purpose at hand,' which then provides a framework for how an individual selects elements from the paradigmatic framework that are "relevant for this purpose." The paradigmatic "horizon," or what and how it can legitimately interpret phenomena, then becomes necessarily smaller as the paradigmatic structure articulated, with some elements being emphasized as relevant and others being discarded as irrelevant (Ruthven, 2007: 44; Schutz, 1967: 9-10). It is this process by which a paradigmatic framework becomes more explicit and defensible.

All fundamentalism that proceeds toward paradigm-theories are necessarily premised upon the axiomatic assumption of exclusive realism. An exclusivist realist assumption, as discussed in previous chapters, entails at least two assumptions: that reality can only be one way, and that a given paradigm or paradigm-theory describes reality the best. As with all Kuhnian paradigmatic frameworks, it is this same axiomatic assumption that allows for the existence of scientific revolutions, and the dogmatism present within both scientific and religious communities and groups (Ellis, 2006: 3-4).

To understand interpretations that view religious and scientific conflict as a result of an incompatibility; one must gain a sense of how authoritative individuals obtain or maintain the loyalty of members of a religious or scientific community or group (i.e. from charismatic, traditional, or rational-legal sources) and to attempt to determine why that authoritative individual adopted their particular inter-paradigm interpretation. It is this

individual power coupled with their inter-paradigm interpretation, not the texts, structures, or accepted history, that inevitably determine the communal or group reaction to the plurality of worldviews and understandings found within Western modern-day societies. It is this authoritarian interpretation of the paradigmatic framework that allows for, what Ruthven refers to as "strategic selections" to be made regarding the available history, texts, interpretations, or worldview(s) regarding a social organization and its adherents as well as denying any other criteria that may be valid based upon their own interpretation of the available material (Ruthven, 2007: 44).

The avoidance of fundamentalism within a scientific or religious community or group would seem to be premised upon the existence of several types of structural criteria. The adherence of the members to a largely unarticulated paradigmatic framework would appear to be a primary criterion since defining alternative paradigmatic frameworks as incompatible with one's own without being able to definitively explain what exactly one's own paradigmatic framework is first would be very problematic. Also, even if some individuals were able to find reasons to interpret alternative paradigms as incompatible with one's own, a proliferation of versions is less problematic with an ambiguous and abstract paradigmatic framework.

A more problematic aspect of a largely unarticulated paradigmatic framework, however, is that it would have difficulties developing rational-legal forms of authoritative structuring and would therefore, most likely, have to depend upon the interpretations of authoritative individuals who would have either charismatic or traditional forms of legitimate authority within the paradigmatic following. The size of the community or group would also have to remain relatively small so as to minimize the necessity of

bureaucratic controls and formal rules that effectively organize larger social bodies and to minimize the amount of social control through either charismatic or traditional means that authoritative individuals can obtain. Lastly, the authoritative history and position held within the larger social structures would become very important since these would determine whether or not the paradigmatic following was perceived as being under threat from within or from social forces without.

CHAPTER 5: METHODOLOGY

From the previous chapters, we have learned that there is often a problematic aspect to both religious and scientifically minded individuals and groups when they attempt to relate to one another. This social problem is one commonly referred to as fundamentalism and has existed for a long duration within the United States as well as other countries and presently affects how both religion and the science are interpreted and taught as being often in conflict with one another. Consequently, new social movements have developed over the course of the last century that seek to either attack or replace existing scientific and/or religious forms of institutional knowledge. The core issue of the so-called science and religious debate appears to be how it is possible for scientific and religious understandings to co-exist, since neither shows any sign of disappearing, in present-day societies?

In the hope of addressing this issue, I proposed the research question: "what historical social circumstance(s), institutional mechanism(s), and paradigmatic framework(s) allow certain religious organizations to teach and utilize both scientific and religious understandings without interpretations of conflict becoming a contentious

issue?" In order to answer this, one must either seek to theorize about what such a group would believe and how it organize itself, or a researcher must seek out and analyze such groups if they already exist. The more fruitful approach would be to find such groups if they already exist as an alternative to the ways in which so many writers and lecturers have attempted simply to theorize a solution to the problem with little effect (Collins, 2006; Gingerich, 2006; Miller, 1999; Scott, 2004).

One such institution is the Saskatoon Centre for Spiritual Living. This religious group is a local chapter of a much larger organization known as the International Centres for Spiritual Living. As will be explained in the following chapters, this religious organization is a unique in that it has, throughout its 83-year existence, attempted to both teach and utilize alternative religious and scientific knowledge and understandings as well as its own. This unique attempt at comparison, contrast, and occasionally integration with alternative forms of understanding reality was so strongly emphasized that the religion was founded as "the Institute for Religious Science and School of Philosophy" (Holmes, 1970: 290), an organization would later break off from this institute to become Religious Science International, and eventually, the International Centres for Spiritual Living. The classes and services at Saskatoon's Centre reflect how they self-identify with other New Thought teachings, and the present attempts to reintegrate the International Centres for Spiritual Living (ICSL) with the United Centres for Spiritual Living (UCSL) demonstrates that they still self-identify with the overall Religious Science movement. Therefore, according to the theoretical framework utilized in this study, to gain an accurate understanding of the teachings, beliefs, and practices of Saskatoon's Centre in relation to how they teach and utilize alternative scientific and

religious knowledge, one must also study their past and present circumstances in order to determine any larger paradigmatic and authoritative structures that they organize within.

Given the difficulty with substantiating and utilizing such abstract and multi-layered constructs as paradigmatic frameworks and authoritative typologies, I employed a triangulation methodology to ensure an abundance of evidence was gathered to determine paradigmatic boundaries and authoritative hierarchical structuring within the religious systems analyzed. A triangulation study utilizes several forms of methodological analysis in tandem to generate a well substantiated understanding of the historical actors, paradigms, and hierarchical structuring resulting from the articulation of paradigmatic frameworks and subsequent routinization of charismatic forms of authority into either traditional or rational-legal forms. The two methods utilized in this study are: content analysis and discourse analysis.

I used the content and discourse forms of analysis in order to determine if the combination of Kuhnian paradigmatic epistemology and Weberian authoritative types could provide a consistent, verifiable, and potentially predictive theoretical framework for understanding how the Saskatoon Centre for Spiritual Living is able to utilize alternative forms of scientific and religious knowledge without interpretations of conflict arising within their religious organization.

The content analysis was utilized to generate a historical analysis of the New Thought religious social movement, the Religious Science social movement, and the International Centres for Spiritual Living religious organization. This was important to determine what social forces, if any, were distinguishable and influential in the

89

development of the present beliefs and practices of Saskatoon's Centre for Spiritual Living; specifically those that allow for the utilization of alternative scientific and religious understandings. A historical analysis of these movements was necessary due to the well substantiated recognition of these movements and organizations as being very influential on the development of the Saskatoon Centre's beliefs and practices, as well as its present-day administration (Braden, 1987: 285, 301-302).

A historical content analysis is also invaluable for proper contextualization and interpretation of any discourse analysis. Particular social groups can often develop distinct conceptualizations and language-use that differs significantly from the norm and the organizations that utilize Ernest Holmes' teachings are no different. For example, in reference to their theistic belief, members of the Religious Science movement can refer to their deity as "The First Cause, the Great I Am, the Unborn One, the Uncreated, the Absolute or Unconditioned, the One and Only. Spirit, or the Creative Energy which is the cause of all visible things. Love, Wisdom, Intelligence, Power, Substance, Mind. The Truth which is real, the Principle which is dependable" (Holmes, 1997: 595-596). Prior content analysis of such groups with exotic language, distinct from the common vernacular, allows the researcher to develop greater ability to empathize with the members of the social group in question and to navigate the discourse(s) utilized by those members, thereby avoiding potential misunderstandings, insults, taboos, etc.

A discourse analysis is utilized in this study for the purposes of obtaining an understanding of the social structuring and the teachings of the social institution known as Saskatoon's Centre for Spiritual Living. To accurately match the Kuhnian/Weberian theory to this particular methodology, a critical realist perspective is necessitated as a

consequence of Kuhn's paradigmatic epistemology. The philosopher, Michael L. Peterson defines critical realism as affirming that "objects exist independently of our thoughts about them (realism) and asserts that human knowledge of reality is a progressive dialogue between knower and known (critical)" (Campbell & Looy, 2009: 73, 223-225). Therefore conceptualizations of true or false ideas or statements are to be considered erroneous. Paradigmatic frameworks and the knowledge-systems that develop within them are considered to be socially constructed and maintained or modified by the social organizations that utilize them.

This deconstruction of discourse(s) to the socially constructed means by which reality is conveyed and understood within set paradigmatic frameworks says nothing of the ontological validity of relations between those concepts and theories and the reality that they represent. Kuhn's epistemology demonstrates how the social construction of knowledge can be influenced by a reality different from our present understandings of it. So while the object of discourse analysis can only be the purposed and utilized signifiers for an experienced reality; the signified must logically remain unknowable until philosophers discover a means by which metaphysical assumptions can be falsified, or until inductive logic is determined to somehow develop apodictically certain truths. Until then, the logical limitations of knowledge and ideas restricts such discussions to the socially constructed signifiers of a potentially unknowable reality.

A discourse analysis, in this context, consists of an analysis of the language utilized in order to convey knowledge and ideas from one individual to another. The object of analysis being the concepts and theories conveyed and constituted by the language involved and the interactions taken in direct reference to them. These objects

of analysis, while being structured and conditioned by systems of restraint, are not necessarily able to be fully articulated or rationalized due to their paradigmatic structuring. Each articulation made by the individuals interviewed therefore represents a particular interpretation of the paradigmatic frameworks utilized and must therefore be combined with others to formulate conclusions about the paradigmatic framework as a whole.

To gain insight into the Saskatoon Centre's paradigmatic framework and authoritative structuring, and avoiding any singular interpretation, as many interviews as possible with the most knowledgeable and experienced individuals regarding the paradigmatic and authoritative frameworks utilized at Saskatoon's Centre was a necessary requirement for this research. Ministers, practitioners, and practitioners-in-training, are the members of Saskatoon's Centre who are necessarily among the most involved in the Centre's activities and who have taken the most classes that the Centre offers. These individuals were approached and asked if they would be willing to participate in this study. The researcher approached these individuals at their monthly practitioner meeting and asked them if they were willing to participate in this study.

These individuals were not considered a vulnerable population and the procedures and questionnaires were passed by the University of Saskatchewan Ethics Committee. The interviews were conducted in an informal atmosphere and they were audio-recorded. The questionnaires were very generalized since the researcher was performing exploratory research and did not know what information would be important. Lastly, all interviews were done face-to-face so that the researcher could answer or clarify any issues that arose during the interview.

For the purposes of this study, content and discourse forms of analysis can be differentiated in terms of the actual process of discourse that occurred between the participants and the interviewer, whereas the content analysis is the process of interpreting the historical teachings of the Centre by way of books that the Saskatoon Centre utilizes in order to teach its history. This distinction between the actual engagement of discourse with participants and the interpretation of books, class handouts, and other writings utilizing a theoretical model necessitates a clear distinction be made in terms of methodology. The myriad of different authors writing at different times and with different influences, and the possibility of misinterpretation by the researcher clearly sets apart content analysis in this study from the active engagement of participants to inquiries made by the researcher. Possible misinterpretations in this discourse analysis could be actively addressed as they were uncovered, the participants coming from the same social group utilized similar language, and given their shared educational experiences, they had been taught similar forms of self-expression.

CHAPTER 6: THE HISTORY OF NEW THOUGHT AND THE CREATION OF THE CENTRES FOR SPIRITUAL LIVING

This chapter presents the results of the content analysis of this research. Through the analysis of several historical texts I applied the combined Kuhnian/Weberian theoretical framework to the New Thought exemplar, started by Phineas Quimby, the Religious Science exemplar, started by Ernest Holmes, the

International Centres for Spiritual Living, and the Saskatoon Centre for Spiritual Living. This chapter seeks to interpret what significant historical episodes, authoritative interpretations or teachings, organizational structuring has allowed Saskatoon's Centre for Spiritual Living to both teach and utilize alternative scientific and religious paradigmatic knowledge without interpretations of conflict arising.

6.1 "I didn't make it up."

Ernest Holmes was the creator of the Religious Science movement and the founder of the Institute for Religious Science and School of Philosophy (which later broke into two distinct organizations; the United Centres for Spiritual Living and the International Centres for Spiritual Living). He never claimed to have original teachings, insights, or revelations, stating that "I am no prophet, I have no personal revelations and if I had I would distrust them, because they might be hallucinations; and I don't trust in self-styled prophets" (Holmes, 1970: 290). He is remembered as a great synthesizer, populariser, and simplifier; famously stating that his teachings "all came from somewhere...I didn't make it up" and "the thing that is original about us is that we don't claim any originality" (Holmes, quoted in Vahle, 1993: 45-46).

Besides founding the Institute and starting the Religious Science movement, Ernest's major original contribution to the world was Spiritual Mind Treatment. Treatment being defined as "the time, process and method necessary to the changing of our thought...clearing the thought of negation, of doubt and fear, and causing it to perceive the ever-presence of God" (Holmes, 1997: 638); this is often accomplished by the enactment of several steps of thinking about certain things or events but does not necessarily need to be a step-wise or a scripted process due to how an individual's

belief is the determining factor concerning what treatment does (Vahle, 1993: 36-37). Even this, however, was not an original idea, "The whole idea of treatment was on the scene before Holmes arrived...Holmes found out what was successful in all other systems...His contribution was to 'simplify it, refine it, divest it of superstition, and give it an actual sequence of steps'" (Vahle, 1993: 45-46).

Saskatoon's Centre for Spiritual Living is a member of The International Centres for Spiritual Living, formerly Religious Science International, and is one of the two religious organizations that developed from the original Institute that Ernest Holmes founded in 1927 (Vahle, 1993: 4, 112-127). Since Ernest Holmes, by his own admittance, did not create a new system of thought, we can gain a sense of where his Religious Science paradigm came from by looking at his biographies and the works that interested him.

When recalling conversations with Ernest Holmes, his brother Fenwicke Holmes clearly recalls the major influences that Ernest utilized to develop his philosophy and consequently, the teachings of the Institute that he was to found. "The thing that really persuaded me it was best to organize [he said], was my study of the contrast between the two great metaphysical movements, Christian Science on the one hand and New Thought on the other. One of them was a close and authoritarian organization, the other was a loose affiliation...[that] agreed on a body of beliefs" (Holmes, Quoted in Holmes, 1970: 210). These two metaphysical movements, and their writers, teachers, and speakers would profoundly influence Ernest and provide him with a paradigm that he would utilize to create a movement that would eventually develop into two global religious organizations.

Ernest was born in 1887 to a rural New England family that was very religious but also very critical of religious teachings (Holmes, 1970: 27, 34-36; Vahle, 1993: 1). This religious upbringing by two liberal and theologically inclined parents would lead to Ernest being a life-long reader of sacred scripture and eventually contribute to the very Christian undertones of the Religious Science teachings and the many explicit Biblical references made in the textbook he wrote in 1928 entitled "The Science of Mind" (Vahle, 1993: 48, 52). Ernest even based the authority of his teachings upon the same authority that Jesus did, stating that, "There is no authority for Science of Mind...other than what it accomplishes" (Homes, quoted in Vahle, 1993: 7).

Philosophical and theological influences other than sacred scripture were necessary for Ernest to develop his philosophy. Apart from his religious upbringing, Ernest was largely ignorant of traditional philosophies of religion and therefore approached everything that he learned in an original way (Holmes, 1970: 144). While Ernest thought that Spiritual Mind Treatment is implied in several passages of the Bible, he admitted that "one would never learn how to give an effective mental treatment by studying it" (Holmes, quoted in Vahle, 1993: 50). The historian Neal Vahle explains that "the principal ideas that Holmes advanced in the Science of Mind were taken from the writings of late 19th century and early twentieth century thinkers whose philosophical teachings came to be known as 'New Thought'" (Vahle, 1993: 46). Ernest eventually studied with or studied the works of many New Thought teachers and thinkers. People such as Ralph Waldo Emerson, considered the father of New Thought; Mary Baker Eddy, the founder of the Society of Christian Science; Thomas Troward, a very influential New Thought thinker and teacher; Emma Curtis Hopkins, the 'teacher of

teacher's' who taught many of the New Thought religious founders; Phineas Parkhurst

Quimby, the discoverer and creator of both branches of the metaphysical movement

(Christian Science and New Thought); and many more New Thought writers and

thinkers all contributed greatly to his interpretation of the New Thought paradigm

(Holmes, 1970: 73-75, 84, 97, 100, 116; Vahle, 1993: 2-3, 46-47, 69).

The New Thought historian Charles S. Braden explains how the institutions that

developed from the Religious Science movement are recognizably a part of the New

Thought movement. This association was not necessarily due to any self-identification

by members or chapters of the United or International Centres for Spiritual Living, but

due instead to their use of the New Thought paradigm. Braden explains how the

> latest to emerge of the larger groups usually considered to be a part of the
> New Thought Movement was the Church of Religious Science. Not that
> they called themselves New Thought, or even considered themselves a
> part of the movement known as New Thought...[however] their emphasis
> upon the aims common to New Thought groups...and other characteristics
> unmistakably indicate that they are one part of a general movement which
> rightly or wrongly has come to bear the name New Thought...Furthermore,
> for years they have actively participated as a constituent movement in the
> International New Thought Alliance [and]...the founder, Ernest Holmes,
> was himself an active member... (Braden, 1987: 285).

As a result of this connection, in order to gain a holistic understanding of how the

paradigm utilized by the International Centres for Spiritual Living was

created/discovered, and why it developed in the manner that it has up until the present

day, we must first understand the history and social circumstances surrounding the

creation/discovery of the New Thought paradigm and its historical developments.

6.2 Phineas Quimby: the Clockmaker, Mesmerist, and Spiritual Healer

The New Thought Movement, though not organized in any way by himself, is Quimby's living monument, and in a sense its far-reaching influence, in all its varied manifestations, is but 'the lengthening shadow of the man,' not always recognized, of course, even by those most devoted to it. Much of his thought and method have been modified, even outgrown, but one who attempts to trace New Thought back to its original source is likely to agree that the real source of it was unquestionably the doughty little Portland healer (Braden, 1987: 83-84).

The New Thought paradigm is historically accepted as having been created/discovered by a 19th century clockmaker and inventor named Phineas Parkhurst Quimby who lived from 1802 until his death in 1866 (Braden, 1987: 4-5, 49; Holmes, 1970: 99-100, 103). Quimby clearly made use of pre-existing paradigms to develop the New Thought paradigm, which Kuhn's epistemology predicts (Kuhn, 1970: 149). He utilized his layman's knowledge of math and scientific activity, Biblical theology, and mesmerism in an attempt to develop apodictically certain knowledge of reality through the utilization of his new 'science.' Quimby was also unique in that he never attempted to formally establish a following and teach his new 'science' to others, stating instead that he was not as interested in teaching as putting into practice his new paradigm and using it to help others (Dresser, 2008: 15).

The story of the New Thought and Christian Science paradigms begins in 1838 when a Dr. Collyer gave a lecture and a demonstration of mesmerism in Belfast, Pennsylvania; a new form of drugless healing brought to America in 1836 by Charles Poyan (Braden, 1987: 48). Dr. Collyer's lecture and demonstration was based on the work of Franz Anton Mesmer, an Austrian physician who began investigations into drugless healing that eventually led him to develop a new healing paradigm, concluding that an "unknown magnetic force was emitted at times from his own body and passed

into his patient, bringing relief and often complete physical healing" (Holmes, 1970: 98).

Following the lecture and demonstration of mesmerism by Dr. Collyer, Quimby

immediately began to investigate the subject. He actively searched for individuals who

would allow him to place them within a "mesmeric sleep" (Dresser, 2008: 33); a state of

awareness that was later renamed "hypnosis" in 1841 by the English physician James

Braid (Holmes, 1970: 98-99).

It was through these experimentations with mesmerism that Quimby met a young

man named Lucius Burkmar who, when placed in a mesmeric sleep, provided a very

useful medium for Quimby to experiment with the mesmeric paradigm. Horatio W.

Dresser, the editor of the book "The Quimby Manuscripts," explains how Quimby's

experimentations and exhibitions with mesmerism, and the eventual establishment of

his new 'science' occurred in stages following his introduction to mesmerism in 1838.

Following his initial introduction to the subject, Quimby went through a "public

exhibitions" period (1843-47), where he explored mesmerism and its limitations; next

came his "intermediate period" (1847-59), where he began to develop a new method of

treating the sick; and last to appear was his "constructive period" (1859-65), where he

developed and utilized his new "Science of Health" to cure the sick in Portland, Maine

(Dresser, 2008: 19). A Kuhnian breakdown of these stages would place the 'public

exhibitions' stage with 'normal science' due to how Quimby accepted the mesmeric

paradigm with its assumptions and assumed limitations (i.e. that the mesmeric sleep

could not be utilized to heal if a lightning storm was happening nearby). The

'intermediate period' with a paradigm in 'crisis' due to how Quimby began to question

the mesmeric paradigm and begin to modify it in significant ways. Lastly, the

'constructive period' could be interpreted as a 'scientific revolution' due to how Quimby completely rejected mesmerism by this stage and was only utilizing his own 'scientific' system of healing. One key distinction between Quimby's developmental stages and Kuhn's references to scientific activity is that the decision to abandon the mesmeric paradigm and to create a new one was only Quimby's decision; not a social decision as in scientific activity observed by Kuhn.

Throughout his time with Lucius, Quimby rejected the mesmeric paradigm based upon his own recognition of too many acute anomalies during his exhibition period. This recognition of crisis forced Quimby to discover/create a new paradigm during his intermediate period to explain the anomalies he was encountering, eventually utilizing them in order to justify, develop, and demonstrate his new paradigm, which he named "Science of Health," "Christian Science," and "the Science of Life and Happiness" during his constructive period (Dresser, 2008: 246; Holmes, 1970: 100). Mesmeric anomalies, coupled with other anomalous mental phenomena that the mesmeric paradigm could not account for, such as clairvoyance, mind-reading, and the reality of thoughts, led Quimby to formulate his own paradigm based upon his interpretation of the New Testament, his layman's understanding of science and mathematics, and the experimental results of his mesmeric experiments with Lucius (Dresser, 2008: 20-21, 30, 34-54).

During Quimby's intermediate period, he began to realize the prescriptions that Lucius was prescribing to cure his patient's physical ailments, while often successful, were stressing his personal credulity. Dresser explains how "Lucius would sometimes prescribe a remedy so simple or so absurd that Mr. Quimby saw there could be no

virtue in the medicine. Plainly, both the disease and the cure must be explained on another basis" (Dresser, 2008: 35). However, the patient's experience of being cured of their disease by following Lucius's advice would not be ignored by Quimby. This unwillingness to discount the beliefs and experiences of his patients led Quimby to establish an ontological primacy of experience within his new paradigm stating that "the sick are my judges, not the well; for as the well need no physician they cannot judge me. Neither am I willing to be judged by the creeds till they can show that their belief is above their natural power" (Quimby, Quoted in Dresser, 2008: 214).

This ontological primacy of experience had two large consequences for Quimby, his new paradigm, and his method of practicing it. The first consequence of this ontological assumption was that, since the patient's were able to define subjectively whether or not Quimby had actually cured them of their disease, their subjective recognition of Quimby's method and cure, being real, must not come from the medicines prescribed by Lucius, and must instead be derived from the confidence that the subject has in the doctor or other medium prescribing the cure (Dresser, 2008: 50). Therefore, the disease and the cure for it were both derived from the patient's consciousness; a paradigmatic assumption that Ernest Holmes utilized when explaining his method of Spiritual Mind Treatment, stating that "unless disease 'originates in consciousness'...'consciousness cannot change it'" (Vahle, 1993: 36).

The second consequence of Quimby's ontological primacy of experience was that Quimby's new paradigm could only be judged in terms of what it does for his patients. Consequently, there was never any need to develop standardized models or explicit procedures or rules for Quimby's new Science; Quimby stated that "questions

would be very easily answered if I assumed a standard, and then tested all disease by that standard" (Quimby, quoted in Dresser, 2008: 151). Quimby cured disease and sickness by way of explaining errors in the patients thoughts to them (Dresser, 2008: 197). These explanations, lacking standards, were specially modified to suit each patient. There were not even any commonalities among them all so the explanation would not make any sense to the well; the explanative cure would have to be modified again so as to make sense to someone else. Quimby explains, "so it is with the sick, each must have his case explained to himself. The Science can be explained to the well, but not by the same parables that are necessary to be applied to the sick" because "it is not intended for them" (Quimby, Quoted in Dresser, 2008: 219).

Obtaining the same result for every experiment was not required or even necessarily desirable. Instead Quimby's only goal with the application of his new paradigm was for his patients to come to the conclusion that they were cured of their disease. This interpretation of the ontological primacy of existence found in the New Thought paradigm was also adopted by Ernest Holmes who utilized it in his teachings stating,

> Do not adopt the letter of my teaching but the spirit and you will find as I did that you will begin to formulate a system that is true for you...I learned that you must develop faith and confidence in your own interpretation of God, man, and the universe" (Holmes, Quoted in Holmes, 1970: 94-95).

Quimby eventually became clairvoyant himself and was able to utilize his new paradigm to cure patients without Lucius and without placing patients within a mesmeric sleep (Dresser, 2008: 67, 81). Quimby's claim was that he could diagnose patients and cure them by utilizing his own clairvoyance to observe the true cause of their disease

and explain to them why they have it. His first most obvious hurdle was to convince his patients that he was clairvoyant. He would accomplish this by taking on their aches and pains and determining their state of mind (Dresser, 2008: 81).

This clairvoyant reading was meant to be proof to the patient that Quimby understood the patient's disease better than they did themselves. Quimby states how "if my wisdom is more than yours then I can help you, but this I must prove to you, and if I tell you about yourself what you cannot tell me, then you must acknowledge that my wisdom is superior to yours and become a pupil instead of a patient" (Quimby, quoted in Dresser, 2008: 142). The two most important aspects of this procedure were Quimby's description of the disease and its symptoms, as described by him and not his patient, and his explanation for this error in thought which caused the disease. The description made the patient take him seriously and the explanation, when understood by the patient, was the cure (Braden, 1987: 106; Dresser, 2008: 67, 197). Dresser explains the significance of this new form of clairvoyant healing as compared to the mesmeric sleep he would utilize with Lucius:

> By sitting near patients, he learned to diagnose their condition, and also learned to read their mental states. Therefore it was possible for him to make the complete transition from mesmerism and all psychical phenomena akin to it to the adoption of his spiritual method of treating disease, that is, by the aid of intuition or direct perception, through 'silence' without mediumship (Dresser, 2008: 67).

Everything in Quimby's new system of healing hinged upon his paradigmatic assumptions concerning what clairvoyance was. The clairvoyant demonstration that Quimby made allowed his patients to believe that he was telling the truth about their disease and its cure (Dresser, 2008: 146). Quimby claimed that "clairvoyance is a state

of existence independent of the natural senses or the body, which has no matter nor reason, but is perfect knowledge. Thought-reading is a lower order connected with mind, but superior to the natural man" (ibid: 195). The existence of this clairvoyant state was proof positive to Quimby that there exists a wisdom or knowledge above anything that the "natural man" can discover with only his bodily senses; thereby effectively creating a dichotomy between the knowledge that the natural sciences can create/discover and the knowledge that his paradigm could create/discover (ibid: 246-247, 258). This conception of the "natural man" was placed in contrast with Quimby's spiritual ideal of the "scientific man" who, in their clairvoyant state could cultivate "spiritual senses, which function independent of matter and see through matter" (ibid 58). According to Quimby, everyone is clairvoyant and can be taught to develop their skills with it to the same extent that he has (ibid: 195, 278). As Dresser explains,

> The basis for this Science was laid in a measure by the discovery that the human spirit possesses senses of powers which function independently of matter. These 'spiritual senses,' as Quimby later called them, include not merely sight or clairvoyance but the power of detecting orders and atmospheres at a distance, the ability to read another's mind, and to travel in spirit, mak[ing] oneself both felt and seen – if the recipient of such a visit were himself clairvoyant (Dresser, 2008: 69).

6.3 Quimby's New Paradigm: Christian Science

Eventually as Quimby further developed and articulated his paradigm, he would draw from his layman's knowledge of the natural sciences and mathematics, from his own particular theological perspective, and from his experience as a mesmerist to explain what exactly was occurring during his mental healings. The claim that it was a new 'science' would remain within New Thought organizations that would follow, and his refined use and explanations of formerly mesmeric phenomena, when combined with

104

Christian ontological assumptions, would make New Thought an obviously religious

movement and exemplar paradigm (Braden, 1987: 56).

Quimby was searching for a means to explain and develop apodictically certain

knowledge. Dresser explains how, "the truth [Quimby] sought to establish was

concretely verifiable truth, written in the human heart and in the Word which Jesus

taught. Consequently, what was needed was not mere affirmation but real

understanding, like workable knowledge of mathematics" (Dresser, 2008: 21). From

this, we immediately must acknowledge the social climate that Quimby came from; he

obviously had a great respect for the Holy Scripture found within the Bible, as well as a

belief that 'real understandings' were somehow linked with the natural sciences and

mathematics. Quimby believed that the natural sciences and mathematics operate

through a direct and unproblematic relationship with the natural world because both

forms of knowledge discovery/creation were supposedly based upon proofs. His logic

of searching for necessary truths like those that supposedly exist within the natural

sciences and mathematics can be found in his writing,

> Can a theory be found, capable of practice, which can separate truth from
> error? I undertake to say there is a method of reasoning which, being
> understood, can separate one from the other. Men never dispute about a
> fact that can be demonstrated by scientific reasoning...The basis of my
> reasoning is this point: that whatever is true to a person, if he cannot
> prove it, is not necessarily true to another (Quimby, Quoted in Dresser, :
> 30).

This interpretation of the sciences and mathematics as an unproblematic form of

proof that others cannot dispute explains why Quimby chose to refer to his new

paradigmatic framework as a 'science.' He would, however, redefine the term science

for his own means and, later, place his new paradigm in relation to the already existing natural sciences. Quimby stated that his new system of mental healing was a science because it was "founded on principles that can be taught and practised, like that of mathematics, and not on opinion or experiments of any kind whatsoever" (Dresser, 2008: 110). These principles were so intertwined with Christian theology that Quimby even went as far as to refer to his Science as "love." He also defined love as something that actually interacts with the physical world; as an "element of itself, without any form" with "no length or breadth, or height or depth; it neither comes nor goes, it fills all space, and melts all error down that comes within its power" (Dresser, 2008: 127, 193). Quimby claimed to be getting his knowledge/wisdom and power through the medium of his clairvoyance; from a seemingly abstract form of perception known to him by a variety of names, such as Science, God, Love, or Scientific Man.

In relating his new 'science' to the natural sciences Quimby divided science into two distinct realms: one dealing with the material world and the other dealing with a realm beyond the material. Quimby's paradigm claims to deal with a knowledge that exists completely independent of human beings, neither created nor invented, only discovered. As such, his New Thought paradigm, interpreted in the manner that he would want, would place the knowledge derived from his clairvoyance from beyond all paradigms; the reality beyond paradigms that cause anomalies within pre-existing paradigms. He even describes his ontological position by explaining,

> There are two sciences, one of this world, and the other of a spiritual world, or two effects produced upon the mind or matter by two directions. The wisdom of this world acts in this way: It puts its own construction on all sensations produced in the mind, and establishes its knowledge after the effect is produced...This is the thing to decide, whether there is a

knowledge independent of man, or whether it is the offspring of an
organized being (Quimby, Quoted in Dresser, 2008: 202-203).

An interpretation that places Quimby's clairvoyant knowledge beyond paradigms
seems highly unlikely, however, due to the existence of many quasi-aesthetic
assumptions made in his paradigmatic boundaries that were later adopted by other New
Thought teachers, practitioners, and organizations. He began developing his unique
paradigm "devoted to truth as his own insight led to it, without regard to prior teachings
save those of the New Testament" (Dresser, 2008: 20). He knew that his new paradigm
must be a scientific one due to how, by his layman's understanding, both the natural
sciences and mathematics proved beyond any dispute how to properly interpret material
reality (Dresser, 2008: 30, 62, 148, 149, 187); but, as already stated, his 'science' was
obviously different from the natural sciences of his day. Other quasi-aesthetic
assumptions adopted by Quimby into his new paradigmatic framework were: that God
exists, created all that is, and that there are no accidents with God; that God is love; that
a life lived in accordance with clairvoyant knowledge of God brings true health,
knowledge/wisdom, and happiness; that disease is not self-existent or created by God,
but is purely the invention of people; and lastly, that people, when properly understood
and perceived, are God (ibid: 96, 190-192, 196-197, 340).

One very important aspect of Quimby's work was that he was one of the only
people who, at least initially, could understand and utilize his new paradigm. Even
though, by his own definition, his paradigm was only scientific if it could be taught and
practiced; he did not develop a successful manner by which other people could become
clairvoyant like him. This was the linchpin of his entire 'science' and his failure to make

others clairvoyant seriously undermined the universality of his new paradigm (Dresser, 2008: 346). He also failed to achieve his own criteria of reducing the knowledge/wisdom discovered by him through his clairvoyant abilities into "self-evident propositions" (ibid: 384); Quimby's quasi-aesthetics, of which there are many, are not self-evident. Consequently, he worked alone and had the force of public opinion, as well as the medical establishment, against him (Dresser, 2008: 131).

Constantly being questioned, challenged, and ridiculed by the general public, along with both religious and medical institutions of his day, Quimby felt he had to resort to defensive posturing, which undoubtedly contributed to his reasoning for constantly attacking both the 'priestly' and 'medical doctor' classes who he blamed for the creation of all the diseases presently experienced by people (Dresser, 2008: 179). Quimby himself recollected that he adopted a fundamentalist attitude toward all other forms of knowing that are dissimilar from his own. Stating that,

> I stand alone, a target at which all classes aim their poisonous darts, for I make war with every creed, profession, and idea that contains false reasoning. Every man's hand therefore is against me, and I am against every man's opinion (Quimby, Quoted in Dresser, 2008: 254).

6.4 The Routinization of Quimby's Science: the Society of Christian Science and New Thought

Quimby never did routinize his teachings and practice into a systematic or institutionalized format (Braden, 1987: 45; Dresser, 2008: 15); however, this did not stop many others from doing so. Following Quimby's death in Belfast on January 16, 1866 there were two widely differing interpretations/routinizations of Quimby's teachings; one known as "Christian Science" and the other known as "New Thought" (Braden, 1987: 5).

The Christian Science interpretation/routinization of Quimby's teachings is a very well articulated, and fundamentalist religious institution utilizing a paradigmatic framework maintained by traditional authority and created by one of Quimby's patients named Mary Baker Patterson Eddy (Braden, 1987: 89; Dresser, 2008: 160-161, 167, 170). The other, New Thought, is a generalization of many other interpretations/routinizations of Quimby's paradigm representing several distinct religious institutions, as well as an international association of individuals, groups, and institutions presently known as the International New Thought Alliance (Braden, 1987: 195; Holmes, 1970: 210).

Historically, the varied interpretations/routinizations of Quimby's healing practice and his largely unarticulated paradigmatic framework fell to four of his former patients: Annetta Seabury, Julius Dresser, Mary Baker Eddy, and Warren Evans who all received healing from Quimby within a two year period 1862-1863 (Braden, 1987: 89). While all of these former patients of Quimby adopted and practised his new paradigmatic form of healing, there were several historical incidents that caused them to interpret/routinize Quimby's paradigm in very divergent ways.

Initially, after the death of Quimby, the first person to attempt to interpret and articulate his new paradigm was Warren Felt Evans. He was the first to publish books that not only articulated Quimby's paradigm, but also began New Thought's historical tradition of integrating and interpreting information from other disciplines such as philosophy, psychology, science, and medicine into their own canon of teachings (Braden, 1987: 89, 93). Also, while Evans accepted most of Quimby's paradigmatic assumptions (ibid: 74, 106, 108, 111), he also disagreed with many others. He chose to dispute several assumptions made by Quimby, such as the need to have a proper

medical knowledge of the human anatomy for "clairvoyant diagnosis," which Quimby

was undoubtedly lacking (Dresser, 2008: 12-13), Quimby's assertion that God was

impersonal (Braden, 1987: 98, 104), the usefulness of material medicine (ibid: 116), and

the idea that disease was cured by reasoning with the patient (ibid 122-123). It was

largely due to this type of paradigmatic questioning and integration with other forms of

paradigmatic knowledge and perspectives that the New Thought movement became as

diverse and open-ended as it is today. Charles Braden, a New Thought historian and

writer, quotes New Thought leader, W. W. Atkinson, as describing New Thought as

having "no fixed principles, settled rules, governing laws, or formal creeds. It took its

own wherever it found it, adding to the list every day while at the same time discarding

what it had outgrown" (ibid: 192).

While Evans was a prolific writer and a practitioner of Quimby's healing

paradigm, he never organized a group following (Braden, 1987: 92, 121, 130). The

formal and institutionalized interpretations/routinizations of Quimby's new paradigm

appear to be due to the actions of a single individual, Mary Baker Eddy. Braden states

how "it must be recognized that it was [Mrs. Eddy's] organizing activity which produced,

either directly or indirectly, both Christian Science and what may be termed the whole

'Metaphysical Movement,' of which both Christian Science and New Thought are

component parts" (Braden, 1987: 130). Following her initial healing by Quimby, Mary

Baker Eddy, then Mary Baker Patterson, started to give public lectures on Quimby's

healing paradigm entitling her talks as "P. P. Quimby's spiritual science healing disease

as opposed to deism or Rochester-Rapping Spiritualism" (Braden, 1987: 130). Dresser

explains,

Mrs. Eddy looked up to Quimby as the great discoverer and healer of the day, the one whose privilege it was to rediscover the truth which Jesus taught. She felt and expressed the profound gratitude and loyalty of one who had been marvellously restored to health. She made no claims for herself (Dresser, 2008: 161).

This is a contentious historical point with members of the Christian Science Church due to how Mrs. Eddy, at some point between 1872 and 1875, chose to deny that she had any influence whatsoever from Quimby's paradigm and practice of it; referring to him as only a "mesmerist" and to herself as the discoverer and final revelatory of her new paradigm, Christian Science. This was to be the first interpretation/routinization of Quimby's paradigm organized into a religious practice (Braden, 1987: 4-5; Dresser, 2008: 167).

Mrs. Eddy published her scripture "Science and Health with Key to the Scriptures" in 1875 and founded a religious institution in Lynn, Massachusetts in the same year (Holmes, 1970: 108). In 1881 the institution was moved to Boston and the Christian Science Church was founded. This organization utilized traditional authority in the form of Mrs. Eddy's position as founder and prophet to interpret and organize their paradigmatic understandings (Braden, 1987: 116, 138) and this organizational scheme ensured that these assertions made by Mrs. Eddy had a lasting effect on her organization. It was also this form of traditional authority that effectively removed the ontological primacy of experience from her organization since personal experiences were not allowed to contradict Mrs. Eddy's teachings within the confines of this organization (Braden, 1987: 4-5, 132).

New Thought historians agree that Mrs. Eddy's Christian Science was not an original discovery or revelation, but was instead a specific interpretation of Quimby's

healing paradigm with only a few modifications in language, practices, and organization (Holmes, 1970: 108). This is supported by copious amounts of historical evidence of Mrs. Eddy's tutelage by and praising of Quimby prior to the founding of the Christian Science Church in 1881. Despite Mrs. Eddy making statements about how later New Thought organizations were "crediting some ignoramus or infidel with teachings they have stolen from me" (Braden, 1987: 142-143); a lot of historical evidence appears to contradict Mrs. Eddy's claims. There exist testimonies from those present during the conversations and readings that Mrs. Eddy had with Quimby in his office, letters and articles Mrs. Eddy made to praise and promote Quimby's healing practice, as well as the information regarding the public lectures that she gave promoting Quimby's new paradigm (Braden, 1987: 130; Dresser, 2008: 161). It was these unsupported claims made by Mrs. Eddy, as well as her specific interpretation of Quimby's teachings that led to the development of New Thought organizations and directly impacted how both branches of the metaphysical movement would develop.

Mrs. Eddy's new religious institution, the Christian Science Church, initially utilized an inclusive and largely unarticulated paradigmatic framework. Early in its developmental stages, Christian Scientists were actively encouraged to utilize the theories and practices of the modern medical establishment (Schoepflin, 2003: 6-7). The myriad of differing hybridizations that Christian Scientists created between the American medical community, Christianity, and Quimby's paradigmatic framework throughout the late nineteenth and early twentieth century involved, but was not limited to, the utilization of medical terminology, remedies, surgeries, and actively working with nurses, doctors, and other medical practitioners (ibid: 8, 77-78, 80).

112

As a result of both external social forces and the authoritative decision-making that Mrs. Eddy utilized as the Charismatic founder and the traditional authority that she wielded as its authoritative leader, the Christian Science movement became fractured and a fundamentalist disciplinary matrix was developed and adopted by both Mrs. Eddy and her followers. The myriad of social forces working against Mrs. Eddy during the formation of the Christian Science movement were many and varied, often involving physicians, attorneys, clergy, legislators, and the press (Schoepflin, 2003: 5).

The four main social forces were responsible for attacking Christian Science practices throughout the entirely of its existence. These social forces were the American medical community's political and legal successes to unify medicine under the sciences, which then necessitated legal concessions be made to the practices of Christian Scientists (Schoepflin, 2003: 3-4), religious critics who attacked what they saw as Mrs. Eddy's "'bogus' Christianity," former students and eclectic mentalists who modified her teachings and questioned her prophetic/charismatic and traditional authority, and lastly, the Dressers accused Mrs. Eddy of doing a disservice to Quimby by claiming to be the discoverer of her system of healing (ibid: 9).

Mrs. Eddy's attempts to distance herself and her organization from potential threats, both legal and ideological, and her fear of losing her position of authority within her movement led to the formation of a "personality cult" around Mrs. Eddy and the creation of a fundamentalist orthodoxy within the Christian Science movement (Schoepflin, 2003: 93). This involved creating sanctioned publications and teachings, collective organizations, defining "'orthodox' Christian Science by emphasizing her divinely sanctioned authority, clarifying doctrines, and solidifying organizations" as well

113

as disbanding all Christian Science organizations that she did not have absolute control over (ibid: 9, 106-108).

This authoritative reaction to social disputes, both external and internal to her organization, caused a radical change in how Mrs. Eddy interpreted her own 'purpose at hand.' Instead of merely seeking to spread her 'revelation' across the United States and working with the medical establishment, as she initially started to do, her purpose at hand came to be the maintenance of her charismatic authority, and the defence of her paradigmatic following from outward threats (Schoepflin, 2003: 6-7, 47, 92). She then committed her paradigmatic followers to obeying her newfound system of relevancies which necessarily excluded many Christian Scientist organizations and led to the establishment of the very dogmatic Mother Church and the disbanding of all organizations not under its influence (Schoepflin, 2003: 106-108).

Mrs. Eddy new system of relevancies made Christian Science's early medical identity irrelevant. Upon adopting her fundamentalist attitude, very similar to Quimby's, towards the medical establishment, Mrs. Eddy created a series of dogmas that are only now starting to be questioned in some extreme circumstances (i.e. allowing modern medical care to be administered to children who are critically ill) (Braden, 1987: 116, 138; Schoepflin, 2003: 29; Vitello, 2010).

These social disputes and the consequent defensive posturing of Mrs. Eddy led to the development of the well-articulated disciplinary matrix of the Christian Science Church which was predominantly due to the similar defensive posturing of the American medical community and the American clergy. It is important to remember that Christian Science was the first organization to be based upon Quimby's paradigmatic framework

and, as such, it appeared to be original in its teachings and goals. As such, it attracted

much attention due to its rapid growth and its very novel ideas concerning the

relationship between religion, modern medicine, and most social problems that could

possibly be thought of (Schoepflin, 2003: 29, 35, 47, 77, 98). Fenwicke Holmes

elaborates,

> I recalled the struggle [Christian Science] had had to establish the legal
> rights of metaphysical practice, contesting with the established church,
> state and medicine in all the courts until no one today would think of
> challenging them. Without question the whole movement owed a great
> debt of gratitude to an organization which had demanded and won the
> legal right to heal the sick by mental and spiritual means (Holmes, 1970:
> 210).

While this may have been the predominant interpretation of the founders of other

New Thought religions that were to follow the development of Christian Science, it was

not the case and does not take into account more recent challenges to Christian

Science practices. Starting in the 1980s Christian Science practitioners came under

renewed attack by the medical and legal establishments in the United States

(Schoepflin, 2003: 205). These legal attacks became possible due to a 1972 United

States Supreme Court decision in Wisconsin v. Yoder and were followed by new state

legislation and Supreme Court decisions which removed the right of parents to deny

their children medical care for religious reasons. These legal changes left Christian

Science adherents on the wrong side of the law. A situation that saw the overall

numbers of Christian Science practitioners drop by fifty-two percent from 1985 to 2000

(ibid: 205-206, 208-209). Rennie Schoepflin, a historian who specializes in Christian

Science, explains,

In Wisconsin v. Yoder (1972) the court rejected 'the older rationale that the state is free to regulate religiously-motivated actions, but it affirmed the states' right to judge such actions in the light of their 'undoubted power to promote health, safety and general welfare'... A clear onus now rested on Christian Scientists to demonstrate to the state's satisfaction that Christian Science healing worked. But given their refusal to submit Christian Science healing to double-blind studies, they faced a seemingly impossible challenge (Schoepflin, 2003: 203).

The other New Thought organizations and religions, in part, owe their existence to the developmental path of the Christian Science religion. Many New Thought historians agree that the reason why some of Quimby's other patients began to develop formal teachings and organizations based upon their own interpretation/routinization of Quimby's paradigmatic understandings was as a reaction to the teachings and practices of Mrs. Eddy's organization. As already discussed, she is credited with ignoring and even insulting Quimby's contribution to the origins of her teachings, as well as having strict authoritarian control over her organization's teachings and the legitimate interpretations and/or expressions of it. Braden explains,

New Thought owes its development in the first place, in part at least, to the feeling of loyalty of the Dressers to P. P. Quimby. They thought he was being betrayed by Mrs. Eddy in her denial of any dependence upon him, and were convinced that Mrs. Eddy and those who accepted her as a revelator of the Truth and as the Founder and organizer of what she was calling Christian Science, were misrepresenting what he had taught and practiced (Braden, 1987: 138).

Julius Dresser and Annetta Seabury, two more of Quimby patients who were responsible for the development of the Metaphysical Movement, began the process of institutionally interpreting/routinizing Quimby's healing paradigm in reaction to Mrs. Eddy's creation of the Christian Science Church. This counter-

116

interpretation/routinization took place when the Dressers, who were married in 1863, began to expand upon their practice as mental healers in Boston in 1883. Until then, they practiced Quimby's paradigm in the same manner as he did; simply healing patients and no aspirations to organize (Braden, 1987: 132).

In 1883 the Dressers created formal classes and gave lectures on the subject of Quimby's science of health and happiness (Braden, 1987: 132-133). They also expounded upon what Quimby had claimed could be done with his paradigm; instead of stopping with the creation of health and happiness, they also began to include other items to be obtained such as wealth, success, and many other goals besides (ibid: 136-137). It can therefore be shown that the Dressers and their students did not simply accept Quimby's paradigm, they also liberally interpreted and even expounded upon it to make it more inclusive.

The result of the interpretation/routinization of Quimby's paradigm by both Mrs. Eddy and the Dressers in the forms of New Thought and Christian Science was that, since the two forms of organization were obviously similar and shared a common history, and both had their beginnings at roughly the same time in Boston, there were inevitably many comparisons made between the two. This is how the so-called "Quimby controversy" began (Braden, 1987: 132). As already discussed, Mrs. Eddy ardently attacked any suggestion that her teachings came from any source other than herself and refused to allow any members of her organization to even relate her teachings to other paradigmatic ways of knowing (Miller, 2008: vi). It was this form of traditional authority and her adoption of Quimby's fundamentalist opinion of the medical sciences that brought the Christian Science Church under heavy criticism in its early

117

years and still today (Vitello, 2010). Consequently, the church has almost always been

defensive of its beliefs, both regarding its origins and its doctrines regarding modern

medical practice.

The 'Quimby Controversy,' coupled with their dogmatic belief system eventually

led to the church being attacked continuously by other religious institutions, medical

institutions, and a growing number of New Thought organizations. There was, however,

an unexpected consequence of Christian Science being attacked and successfully

defending itself during the early years of its existence; it created a niche for other similar

organizations that were based upon Quimby's healing paradigm. Ernest Holmes

expresses his historical interpretation of the shielding effect that Christian Scientists had

open the other New Thought teachers and religious founders who followed, stating that,

> I myself had never been threatened by secular authority of any kind nor
> even by the more barded arrows of religious bigotry. I did not have to
> suffer with the founders of Christian Science or of Mormonism, for
> example. I escaped being called crazy or foolish or schizophrenic or even
> a Bible-wrecker' (Holmes, quoted in Holmes, 1970: 210).

It was partially due to this social niche carved out by the early Christian Science

Church in North American society that the New Thought organizations that followed,

being so similar because they were utilizing the same Quimby exemplar, could be much

more inclusive with their beliefs and allow their paradigms to remain much more

unarticulated. The earlier New Thought writers, Warren Felt Evans and the Dressers,

were much more inclusive in their interpretation of Quimby's paradigm. They had no

problem with other forms of religious belief or the medical sciences, and the Dressers

did not take any authoritarian control over their interpretation/routinization of Quimby's

paradigm. New Thought groups eventually established themselves due, not so much to any form of rigid traditional authority as to either charismatic or rational-legal authority in the forms of free and open communication among the various groups and communities that eventually developed due to the teachings of the Dressers and indirectly due to the teachings of Mrs. Eddy. One important reason for this lack of traditional authority is how New Thought groups and religions adopted Quimby's exemplar of not adopting standards. They all are "not satisfied with any system originating in other ages, because systems do not grow, while Mind does...New Thought can never therefore be a finished product and if it remains truly New Thought, it will never be completed enough to creedalize it..." (Braden, 1987: 13). Braden explains how this process of collaboration eventually caused religious institutions to develop based upon the New Thought paradigm;

> Those who, like the Dressers, practiced this mental science also taught their philosophy and method of healing, and some of those who taught in turn healed and taught others. The inevitable result was the formation of little groups of interested persons, each operating independently of the others...Some of who were healed and who undertook to teach and heal were ministers. It was one of these, J. W. Winkley, a former Unitarian minister, who, naturally enough, first organized his group as a church in Boston, calling it the Church of the Divine Unity, incorporating thus, as an integral part of the new emphasis, the element of worship (Braden, 1987: 149).

Another significant influence on the development of New Thought movement took the form of members of the Christian Science Church who rebelled against Mrs. Eddy's particular utilization of traditional authority. Important New Thought organizers and teachers such as Ursula Gestefeld and Emma Curtis Hopkins were once students of the Christian Science Church who eventually broke with that organization due to its

restrictive and fundamentalist organization (Braden, 1987: 138). Building upon the

foundation laid by the Dressers, they helped to create an even larger group of New

Thought adherents and practitioners that would eventually either form their own

institutions or contribute to the founding and function of the International New Thought

Alliance (INTA).

The INTA began as a trend where like-minded individuals and groups began to

contact one another and pool their resources to both teach and engage in activist work

(Braden, 1987: 170). As early as 1892 large associations of New Thought groups

began to form, eventually developing into "the Metaphysical Club of Boston" in 1895

(ibid: 9). This organization, which was the precursor to the INTA, was the first to attempt

to formulate concise definitions and statements of purpose, and to describe the features

of the New Thought movement as a whole (ibid: 9). This very inclusive organization has

greatly influenced and been influenced by the development of New Thought religions by

spreading information, hosting congresses and lectures, and further

interpreting/routinizing Quimby's paradigm (Braden, 1987: 26). Each constituent group

member is an "autonomous unit" and "nothing in the constitution shall be construed as

limiting the freedom of thought and action of any group so long as it conforms in a

general way to the ideals and purposes of the INTA" (ibid: 203). It has no independent

existence of its own, no local programs, and it's primary function is to sponsor

conventions, retreats, and congresses (ibid: 229).

6.5 The New Thought Institution: International Centres for Spiritual Living

The International Centres for Spiritual Living is definitively a New Thought

organization. Although traditionally many chapters of Religious Science International

did not consider themselves as part of the New Thought movement, the shared

paradigm that they have inherited from New Thought teachers and organizations by

way of the founder, Ernest Holmes, is unmistakable. It is this largely unarticulated and

yet widely influential New Thought paradigm that has given the International Centres for

Spiritual Living many of their beliefs and the foundation of its practices. As a direct

consequence, this has led to their ability to interpret other paradigmatic knowledge as

either compatible with their own and/or their ability to integrate other paradigmatic

knowledge with their own.

This abstract and largely unarticulated paradigm that New Thought groups utilize

allows for large-scale interpretations of compatibility and attempts at integration with

other forms of paradigmatic knowledge; however, to maintain its unique ability to be

inclusive and permeable to so many forms of paradigmatic knowledge, it cannot be

articulated to the point where paradigmatic boundaries become easily identifiable,

thereby excluding many forms of alternative knowledge. Despite this ambiguity and

vagueness, the New Thought paradigm has historically been such a useful means to

interpret reality that it has guided the formation of many New Thought groups and

religions (Braden, 1987). Even though it remains vague and largely unarticulated, there

are several clear and distinct axiomatic assumptions that delimit the New Thought

paradigm, making it identifiable. Braden and Holmes explain,

> The centrality of Mind, their concept of man as divine, their insistence
> upon the immanence of God to a point scarcely to be distinguished from
> pantheism, their clear distinction between the Jesus of history and the
> Christ, and their practice of metaphysical healing...these and other
> characteristics unmistakably indicate that they are one part of a general
> movement which rightly or wrongly has come to bear the name New
> Thought (Braden, 1987: 285).

New Thought...accepted the demonstration of the presence and reality of a soul independent of the vehicle in which it functions and emphasized that soul is not to be looked upon as a by-product of evolution, a composite of chemical reactions and instincts, a pawn of nature. All branches of the movement accepted soul as an entity emerging from and yet immersed in Infinite Being and not subject to death or annihilation...it claimed scientific demonstration of the existence and nature of the soul and developed a system for the purpose of applying the powers of the soul to the attainment of health and abundance. This system was an entirely new concept in the field of religion (Holmes, 1970: 110-111).

There are also many different paradigmatic frameworks utilized within the New Thought movement. The relationship between the INTA or the New Thought movement as a whole, and the specific New Thought institutions or groups in existence is the 'paradigms-within-paradigms' phenomena that Kuhn discovered/created while utilizing his paradigmatic epistemology to study the natural sciences. Specific New Thought institutions and groups fit easily into the categories of more specific exemplars or disciplinary matrixes that are akin to the differing four levels of paradigms found within the natural sciences (the natural science, disciplinary, sub-disciplinary, and communal paradigmatic forms).

The New Thought paradigm as it presently exists and is articulated by the INTA has its parallel in the natural scientific paradigm which is largely articulated by scientific groups such as the U.S. National Academy of Sciences. Each New Thought organization has its own paradigm akin to a specific scientific discipline such as biology or chemistry and, depending upon how each institution is organized, there is even room for sub-disciplinary or communal paradigms as well. The Religious Science paradigm created by Ernest Holmes parallels the New Thought paradigm very closely with very few new articulations and quasi-aesthetical assumptions being introduced to

differentiate his new disciplinary paradigm from the overarching New Thought paradigm. Assumptions such as simplicity, that God is impersonal and good, that God does not want us to be sick or to suffer, and egocentric healing (how healing came, not from the mind of the sick individuals, as Quimby thought, but from the healer's own mind), and his procedure of Spiritual Mind Treatment all serve to demonstrate the existence of a disciplinary matrix utilized by the International Centres for Spiritual Living, but also one that resides within an overarching exemplar that began with the work of Quimby (Holmes, 1970: 87, 90-91, 130-131; Vahle, 1993: 18-19).

As already explained, Ernest Holmes was very involved with the INTA. He also was well read in New Thought literature and was a student of several New Thought and other Metaphysical teachers including Mrs. Eddy, Quimby, and Emma Curtis Hopkins (Holmes, 1970: 84, 116, 131, 145, 196). The vague paradigmatic boundaries that New Thought organizations adopt definitely would have had an effect upon Ernest's concept of what a religion is and could be. Ernest exemplified his understanding that religious paradigms should be largely unarticulated by stating "religion is really a life, not a creed...an atmosphere, not an object" (Holmes, quoted in Vahle, 1993: 10). He was not in a situation similar to Quimby where he would be studying completely new phenomena and creating completely original ideas with the public mindset against him. He was working within a well defined paradigm that had already amassed a very large literature base, had gain acceptance and thereby established a social niche in North American society, and had formed into many teaching and religious institutions by the time he started his teaching career in late 1915 (ibid: 148).

The consequence of working within such an inclusive and dynamic paradigm was that Ernest would not have had any reasons to develop a fundamentalist attitude. There are three reasons for this: first, due to the sheer number of individuals, groups, and institutions that had adopted the New Thought paradigm, there was no need to single out Ernest or his new institution for special criticism. Second, the New Thought paradigm that they had adopted does not necessitate an exclusivist realist ontological stance, actually arguing against such beliefs (Vahle, 1993: 33). And third, the New Thought paradigm had, by the time Ernest had founded his new institution, been widely utilized in the United States and in other countries around the world for decades. Therefore there was no need to interpret/routinize Ernest's charismatic exemplar for the purposes of defence. Other social and organizational forces would come into play to force Ernest to interpret/routinize his charismatic authority much later in his career (Braden, 1987: 308; Vahle: 119, 121).

Both Ernest and the religious/philosophical teaching institution that he founded, while not necessarily being directly affiliated with the INTA, were similar enough that many chapters, ministers, practitioners, and Ernest himself chose to become members (Braden, 1987: 285). The members of the INTA, while being very inclusive in their beliefs, held many similar ideas concerning reality and how they could engage it for particular desired results (Braden, 1987: 285; Holmes, 1970: 110-111). Consequently, there was no reason to single out Ernest or his new institution for special criticism.

Another reason why Ernest and his new institution did not develop fundamentalist attitudes was the New Thought axiomatic assumptions that dealt with the unknowable and ambiguous assumptions required when discussing the reality of

God. Since explaining God was something that they could not even attempt, the

concept of socially or even individually relative knowledge was adopted. Braden

explains,

> one must emphasize that the science upon which New Thought healing
> practice rests 'is simply the knowledge of the One Cause and all things,
> conditions, movements, functions as the effects of this One Cause'...New
> Thought recognizes, of course, that not everyone can or will work from this
> high principle and that there will be need therefore for various other types
> of practice, 'all good and proper in their own sphere' (Braden, 1987: 221-
> 222).

These forms of paradigmatic ambiguity obviously run counter to the

fundamentalist doctrines that Quimby and Mrs. Eddy utilized. Ernest did not want his

new institution to be based upon charismatic or traditional authority so he was careful to

point out the paradigmatically valid means of legitimating his ideas. He would state that

"this is my revelation – not yours. It must always be open at the top for new

understandings and insights" (Braden, 1987: 302). In relation to his institution he would

state how they should "never let our movement get into that static position intellectually

that shows a dearth of spiritual growth where you supposed everything has been

said...there is nothing in our movement that restricts anybody, nothing ties you down; to

think otherwise is stupidity. Moreover there is nothing in our movement that is trying to

promote anybody. Our movement is democratic" (Holmes, 1970: 290). Instead of

placing authority in the hands of traditional roles or in a bureaucratic system of rules and

procedures, Holmes placed it squarely on the good that it did for others, stating that

"there is no authority for Science of Mind...other than what it accomplishes" (Holmes,

Quoted in Vahle, 1993: 7).

This 'open at the top' assertion kept Ernest searching for new information, knowledge, and insights to integrate into his new paradigm (Vahle, 1993: 5). He would often teach from the scriptures of different religions (Braden, 1987: 294; Holmes, 1970: 166-167) and the Institute he founded offered the most comprehensive and diverse teaching courses in the history of metaphysical movements. Classes on subjects such as - Bible studies, comparative religions, idealistic philosophy, metaphysics of the Bible, leadership development, homiletics, ancient and modern philosophy, applied psychology, and many more besides were taught by distinguished professors from the universities of Southern California at the Institute (Holmes, 1970: 264-265; Vahle, 1993: 296).

While being able to define roughly what his Religious Science paradigm was, Ernest was able to keep it very abstract and ambiguous to allow for integrative changes in the institutional understandings. When asked to define his movement, Holmes stated that it "is the correlation of the laws of science, opinions of philosophy and revelations of religion applied to human needs and the aspirations of man" (Holmes, Quoted in Vahle, 1993: 7). His definition of what a "science" is, while maintaining close parallels with Quimby's original definition, was any useful teaching that "can be taught...can be learned, and it can consciously applied with a certainty of definite and repeatable results" (Holmes, Quoted in Vahle, 1993: 7).

The Religious Science paradigm is so ambiguous and vague that the articulations of the paradigm that allow for an explanation of Spiritual Mind Treatment is secondary to the actual practice itself and the results obtained. These practices of physical and emotional healing made by practitioners and members of his institution

were, again, the only authority on which these teachings resided. However, healing did

not only have to come from the practice created by Ernest; he explained, "anyone can

heal...who believes he can, and who will take the time to set the belief in motion through

the Law" (Holmes, quoted in Vahle, 1993: 18). It was not the procedures learned or the

words utilized in Spiritual Mind Healing that caused the effect, but rather the meaning

attached to those procedures and words, as well as the belief of the person utilizing

them that, according to Ernest, caused the results (Vahle, 1993: 34, 36-37).

Ernest's interpretation of treatment was, given the New Thought paradigmatic

assumptions, based upon accessing God (Vahle, 1993: 14). This paradigmatic

assumption had two large consequences: first, it led to the conclusion that treatment

could be used for any number of purposes in life (ibid: 14-15), and secondly, by their

own paradigmatic interpretation, the practice of Spiritual Mind Treatment is not

falsifiable because God cannot fail (ibid: 39). Vahle explains,

> Holmes was emphatic on the importance of getting results. 'Our work rests
> entirely upon demonstration,' he said, ' and the kind of demonstration we
> believe in is the kind that can be checked by a physician...If we are
> treating for the removal of a cancer, we have not made a demonstration
> until the cancer is gone.' Treatment should be repeated until the result is
> obtained. 'If the thought is not manifesting in our experience, we should
> work until it does' (Vahle, 1993: 17).

The result of placing little to no emphasis upon the explanation of treatments

meant that the Religious Science paradigm, while being based upon fulfilling the

aspirations of people, whatever that may be (Vahle, 1993: 14), maintains no formal

explanation of how this is brought about. Ernest taught that theological differences play

no part whatsoever in Spiritual Mind Treatments (ibid: 33). His conceptualizations of the

divine or God were so liberal that he concluded that changing someone's religious

convictions was unjustifiable, and that "each must approach the great reality in his own individual way" (ibid: 31).

Eventually, as the Religious Science movement expanded with increasing chapters getting licensed, there was understood to be a requirement of developing credentialing systems for practitioners and ministers who wished to obtain particular statuses or roles within the legislative arena of Ernest's institute. These organizational standardization requirements as well as the organizational requirements of managing, fundraising, and other bureaucratic necessities required an expansion of the Institute's rational-legal authority.

6.6 Legitimate Authority and the Splitting of Religious Science

Ernest Holmes utilized and established many different forms of legitimate authority throughout the creation of his paradigmatic following, the establishment of his Institute of Religious Science and Philosophy, and its development into the two organizations that now claim leadership of the religious science movement (Vahle, 1993: 5) - the United and the International Centres for Spiritual Living. Ernest made a conscious decision to routinize his charismatic authority into an organizational format that was to be based upon rational-legal authority and democratic principles but, in the end, his perceptions of internal threats to his teachings led him to desire and maintain absolute authority afforded him by his former, and arguably until his death, the then present position of charismatic leader of the Religious Science movement.

His new purpose at hand caused a change his paradigmatic system of relevancies, which appeared to the members of the IARSC, a rational-legal organization premised upon being 'open at the top' for new insights and knowledge, as well as being

based upon the principles of democratic process, that Ernest was attempting to make those foundational principles irrelevant. It was Ernests alteration of his purpose at hand and the subsequent modification of what he considered to be relevant to the Religious Science movement which split said movement in two.

In the beginning of Ernest's teaching career, starting in 1915, he relied solely upon his charismatic authority to maintain his following. Many of his followers, while recalling his lectures and teachings would often make confessions such as: "I really don't know much about what he said, but I sure did like it" or "it didn't make any difference what he said, something came out that was catalytic and synergetic" (Vahle, 1993: 56-57). He was definitely recognized as being of an extraordinary and exemplary character because what he actually taught seemed to have very little to do with his following.

Eventually, both Ernest and his brother Fenwicke would lecture together at libraries and theatres. During this time, both of them would learn two important lessons concerning the operation of charismatic authority. The first lesson was a distinction between rational communication and the subjective impression or authority that charismatic individuals were able to hold over a group of people. Ernest would state, "it isn't what you know, but what you make people think" (Holmes, quoted in Holmes, 1970: 166). He could demonstrate this assertion by lecturing on topics that he, himself, did not understand and having the crowd appreciate his message. Fenwicke would come to interpret this aspect of Ernest's personality as a "subjective quality of attraction [that] was both personal and spiritual" (ibid).

The second lesson that the two brothers would learn about charismatic authority was that it is intimately tied to people's interpretation of the supposed charismatic individual. This form of organizational authority, according to Weber, is based upon "devotion to the specific and exceptional sanctity, heroism or exemplary character of an individual person," not of their particular message or worldview (Weber, 1947: 328). At one point, there was a discussion between the two Holmes brothers and another charismatic leader to take over her group following because she had to move away. This attempt met with complete failure as her following quickly dispersed under the leadership of Ernest and Fenwicke. These and other similar experiences led the brothers to conclude that, "the only way an institution can carry on successfully from one teacher to another and from one age to another is to create a church entity or membership loyal to the institution itself. The people will then accept a new teacher to guide the institution" (Holmes, 1970: 179). It was at this stage that the two brothers began to consider routinizing their charismatic authority into either traditional or rational-legal authority to maintain their teachings and followings.

Ernest was uncertain that routinizing his charismatic authority was in the best interests of the group following that he had created, but eventually "wealthy and influential friends" convinced Ernest to organize his teachings into an institutional format (Braden, 1987: 294-295; Holmes, 1970: 210-211). He then proceeded to obtain a California state charter as a non-profit organization, founding the Institute of Religious Science and Philosophy in 1927 (Braden, 1987: 211). To manage his new institution, he established a self-perpetuating Board of Trustees and obtained for himself the position of Permanent Trusteeship, which gave him a permanent seat on the board and

the final say in all decision-making that was to occur within his new Institute (Braden, 1987: 302-303; Vahle, 1993: 83, 91-92). Vahle describes the Institute's managerial scheme;

> The power, accorded to Holmes and Holmes alone, gave him the right to ask for and receive the resignation of any member of the Board of Trustees at any time, including the corporate officers. Holmes' continuing control of the management of the Institute was further assured because the Board itself was organized as a self-perpetuating group, not subject to re-election from a voting membership...Holmes played a central role in the selection process serving almost always on the Board's nominating committee...[and], as a permanent trustee, had a life tenure and was not himself subject to election (Vahle, 1993: 92).

As a consequence of his permanent trusteeship Ernest was in possession of all three forms of legitimate authority (charismatic, traditional, and rational-legal) within his institutional setting. He never did lose his charismatic authority within the Religious Science movement. This was made obvious when other groups bearing the same name as his Institute began to appear around Los Angeles. These groups were "quite independent of the control of the original Institute, though the Holmes textbook as well as other literature was used. Only the personal loyalty of various former students of Holmes held them together" (Braden, 1987: 297). Eventually this aspect of his charismatic authority would become routinized as well when the Board of Trustees began to authorize chapters under their state charter in 1938, thereby replacing Ernest's personal charismatic authority over these groups with the rational-legal authority in the form of the rules and regulations of the parent Institute (Holmes, 1970: 253-254; Vahle, 1993: 86-87). His charismatic authority would also become very evident during "the split" in the Religious Science movement (Vahle, 1993: 121-127).

Ernest also possessed both traditional and rational-legal forms of authority within the Institute and actively demonstrated those forms of authority regularly. He possessed rational-legal authority by virtue of his permanent trusteeship and his seat on the Board of Trustees. This authority was, in part, rational-legal in scope due to its source coming from the adherence of members to the by-laws of the Institute (Vahle, 1993: 91-92). However, there are also many reasons to categorize his authority as traditional as well. He often refused to work within the institutional framework that he had helped to create. One member of the Institute explained how "'Ernest would accept no limitation to his own spontaneous individuality,' and as a result, tended to by-pass rules and regulations he himself established for administering the Institute" and "on occasion [he] did not respect the authority he granted to those who worked directly under him" (ibid: 101, 103). This situation fits well into Weber's description of traditional authority (Weber, 1947: 344). Some key indicators between traditional and rational-legal authority being the arbitrary use of personal authority granted to individuals with traditional authority and the well-defined authority utilized by means of impersonal rules and procedures found within rational-legal authority (Weber, 1947: 343).

While Ernest technically had authority by way of rational-legal means derived from and limited to the Institute's state charter, the authority that Ernest enjoyed was such that he could, and often did, ignore and/or subvert other forms of rational-legal authority around him. Obedience could therefore only be given to the person of Ernest who was capable of changing the legally established impersonal order. This was a clear demonstration of both charismatic and traditional authority within the restrictions of the Institute, its teachings, and its charter.

132

Eventually as the Institute and its chapters grew and developed further to the point where more organizational routinizations were required. Almost immediately after its formation, the Institute's Board of Trustees saw fit to reorganize the Institute's activities along religious lines. This occurred against the developmental vision that Ernest had. He had initially done his best to emphasize that the Institute was not a religious organization, stating that, "the institute...is not a church, subscribes to no creed, observes no particular custom, ritual or performance" (Holmes, quoted in Vahle, 1993: 83). But following the report of an advisory committee appointed by the Board of Trustees in 1929, it was decided that the Institute of Religious Science was "essentially a religious institution." The religious aspects of the Institute then became paramount as official policy (ibid).

Other routinizations were eventually adopted to maintain coherency among the various chapters of the Religious Science movement. In 1932 the Institute authorized a credentialing system for practitioners who wished to be legally licensed under the Institute to perform Spiritual Mind Treatment and to charge for their services. The two criteria to be met were the completion of a specified curriculum of courses and well documented and verified demonstrations of treatment that met the Institute's criteria of what a successful treatment could be (Vahle, 1993: 85). Note here that, for the purposes of being licensed as a practitioner for the Institute, the ontological primacy of experience for both patients and practitioners was subverted by the Institute's rational-legal authority in the form of rules and procedures. This was contrary to the allowances made within Ernest's paradigmatic framework for anyone to heal who thinks that they can heal and for the results to be the only authority within the teaching. It was here that

a noticeable rift between the charismatic and traditional authority operating within the

Institute and the rational-legal authority held by Ernest and the Board began to widen.

Throughout the 1930s and 1940s several other routinizations of Ernest's

charismatic following were felt to be necessary. In the year 1938, the Board established

policies governing ordination. Only such persons who had met the Institute's

educational requirements and were needed to perform the duties of a minister or

assistant minister were to be ordained (Vahle, 1993: 87). Another important

routinization took place in 1947 when the Board approved a policy "which required that

all material be submitted to a committee of the Board for approval" (ibid: 90). This

policy was supposedly enacted to maintain the "integrity of the teaching" (ibid: 89) but,

like the credentialing system for practitioners, they were exemplifications of rational-

legal forms of authority coming into conflict with the traditional authority created and

maintained by Ernest by way of his paradigmatic framework. Vahle explains,

> The action of the Board and Holmes in exercising tight control over the
> teachings of Religious Science seems to contradict a position that Holmes
> held in regard to all his teaching – that is that it was 'open at the top for
> new understandings and insights.' Holmes often stressed that Religious
> Science 'should revere all religious concepts,' and that the Science of
> Mind was 'never a closed book' but continued to gather spiritual truths'
> from every source and every person's experience' (Vahle, 1993: 90).

It was these contradictions between the traditional authority created and held by

Ernest that was based upon the paradigmatic framework of his teachings, and the

traditional/rational-legal authority created and developed by Ernest and the Board, that

eventually led to members of differing Religious Science chapter groups wanting

alternative rational-legal authoritative structuring to be made. Ernest's charismatic

authority was presently tied together with the traditional/rational-legal authority of the Institute's Board and the decisions that it made under Ernest's leadership. Authoritative fault could not be found within the routinized Religious Science movement on charismatic grounds due to how the authority of any teachings or organizational issues is derived from the person possessed of charismatic authority (Weber, 1947: 328). Since Ernest was leading the Board and guiding the creation of their rules and procedures, his charismatic authority was tied to the Board's authority. Any organizational disputes would come from either other charismatic sources arising within the movement or from the traditional authority that both empowered and limited Ernest within the context of his teachings; traditional and rational-legal authority that was beginning to widely diverge from the teachings and the paradigmatic framework that Ernest has established.

One of the main reasons to think that Ernest had routinized some of his charismatic authority into traditional, as well as rational-legal authority was his interpretation of the Religious Science paradigm. Weber explains how "a system of imperative co-ordination will be called 'traditional' if legitimacy is claimed for it and believed in on the basis of the sanctity of the order and the attendant powers of control as they have been handed down from the past, 'have always existed'" (Weber, 1947: 341). The Religious Science paradigm that Ernest had created/discovered was interpreted by him to extend back historically well past Quimby, and even Jesus, to the time of Plato (Holmes, 1970: 109-111, 296; Vahle, 1993: 7). Fenwicke describes Ernest's teachings as beginning "with the transcendental position of Plato, Jesus, and Emerson, the acceptance that the real nature of being is Goodness, Wholeness and

Truth, an impersonal Source or Reservoir from which all persons might draw directly and not be some fickle choice of Deity itself" (Holmes, 1970: 130-131).

It was these historical interpretations coupled with Ernest's statements to the effect of not being original in his works and teachings (Vahle, 1993: 45-46) that routinized Ernest's teachings into a traditional paradigmatic framework that appears to have been "handed down from the past" or "hav[ing] always existed" (Weber, 1947: 341). Therefore, when Ernest founding his Institute, he was creating a routinization of his charismatic authority that was much larger and potentially distinct from the rational-legal authority of the Institute; yet this situation was eventually found to be unacceptable to Ernest due to his inability to accept limitations placed upon his spontaneous individuality (Vahle, 1993: 121).

Ernest, in his attempts to maintain total control over the Religious Science movement, enacted legitimate authority regarding his charismatic and rational-legal status but failed to observe "the traditional limits of his authority" as a leader, educator, and thinker in the Religious Science movement (Weber, 1947: 342). The paradigmatic framework that he created/discovered provided Ernest with a definite role as leader and educator within the Religious Science movement but there were also clear and distinct paradigmatic assumptions that would restrict Ernest within these roles. He taught that the movement must be "democratic" and "open at the top" so that no single individual could control or direct the movement and keep it from changing continuously (Holmes, 1970: 221, 223, 227-228, 290; Vahle, 1993: 33). As Ernest himself explained,

> There is no place for idle adoration of any single individuals. Our belief is too deep and broad for this, too inclusive, and we should never forget that anyone who mistakenly builds high walls around his very small estate will

shut out a broader horizon than he can possibly include (Holmes, quoted in Holmes, 1970: 185).

Ernest's teachings, written down in his work, "The Science of Mind," and taught in a formal manner by his Institution, became routinized into traditional forms of authority (Holmes, 1970: 264). This routinization of Ernest's healing ministry into forms of traditional authority contradicts the exemplar that he created and the paradigmatic assumptions inherent within the Religious Science movement. To take on traditional authoritative roles with paradigmatic assumptions such as the value of democracy and the value of change and growth from almost any source is an obvious contradiction. Weber's discussion of how organizational decision-making occurs within traditional spheres of authority and the actual events that occurred within the Institute as Ernest led the development of the Religious Science movement parallel very closely. As explained earlier, while the Board of Trustees maintained managerial authority over the Institute and its activities, Ernest, as Permanent Trustee, was always in ultimate control and had the final say in all matters. Weber elaborates,

> In contrast to the rational hierarchy of authority in the bureaucratic system, the question who shall decide a matter – which of his officials or the chief himself – or who shall deal with complaints, is, in a traditional regime, treated in one of two ways. (1) Traditionally, on the basis of the authority of particular received legal norms or precedents. (2) Entirely on the basis of the arbitrary decision of the chief. Whenever he intervenes personally, all others give way to him (Weber, 1947: 344).

Eventually it was Ernest's inability to recognize the problematic aspects of re-routinizing his Religious Science movement which caused the split therein. It was the desire to enact the Religious Science exemplar that caused members of the Religious Science movement to request that changes be made to how the movement managed.

The adherents of Ernest's exemplar wanted a less traditional and more rational-legal form of authority (Braden, 1987: 302). As more and more Religious Science chapters were chartered, church leaders began to meet informally to discuss common problems. This grouping of church leaders eventually organized into a formal organization under the Institute's charter in 1942 as the Religious Science Chapter Association (Vahle, 1993: 111). In 1947, after negotiating with Ernest, this organization was chartered under the state of California to obtain legal recognition as a constitutionally bound religious organization that would manage the churches of Religious Science (Braden, 1987: 298; Vahle, 1993: 112).

This organization, named the International Association of Religious Science Churches (IARSC), worked in conjunction with the Institute to grant charters to churches and manage the movement as a whole, while the Institute continued to determine and maintain educational standards for practitioners and ministers (Braden, 1987: 298-300). It was an organization that was structured to utilize rational-legal authority by democratically electing its officials and maintaining democratic safeguards to ensure that the membership of the organization always had the final say regarding disputed issues (Braden, 1987: 301; Vahle, 1993: 117). For a five year period, between 1949 and 1954, these two organizations, the IARSC and the Institute, worked in conjunction with one another. Eventually, however, Ernest and the Board of Trustees at the Institute began to get frustrated with their own lack of authority over the movement and sought to reclaim the charismatic and traditional forms of authority that they had ceded to the IARSC.

In 1953, Ernest and the Board of Trustees of the Institute drafted a document entitled "The Plan" wherein their institution would change its name to the Church of Religious Science and dissolve the IARSC, taking over all the management responsibilities and functions of the IARSC in the process (Vahle, 1993: 117). It was this attempt, yet again, to routinize the Religious Science movement from a strictly rational-legal form of authority, back into a form of traditional authority that caused a split to form in the movement. The Plan had none of the democratic safeguards that the IARSC constitution guaranteed, and the new Church of Religious Science would be managed in the same manner as the original Institute had been; with a self-perpetuating Board of Trustees and Ernest with his position of Permanent Trusteeship (Braden, 1987: 308; Vahle: 119, 121).

This undemocratic violation of Ernest's exemplar and the prior establishment of the IARSC wherein the paradigmatic followers were loyal to the democratically structured system of rational-legal authority, coupled with the Board's unwillingness to negotiate 'the plan' with the members of the IARSC, left the members of the Religious Science movement with a difficult choice; to adopt the plan and join the new Church of Religious Science or to remain members of the IARSC (Vahle, 1993: 123). Given how the two separate institutions were both legitimate forms of rational-legal authority within the state of California, and given Ernest's attempt to charismatically contradict and co-opt the authority of the IARSC, the choices made by the members of the Religious Science movement would seem to have been influenced greatly both by their recognition of the charismatic authority of their leaders, and the extent to which they had become involved with the IARSC.

It was at this juncture that Ernest's long-held charismatic authority came into play; the split in the movement was tallied at forty-six churches or fellowships adopting 'the plan,' and only nineteen choosing to remain with the IARSC. The nineteen that chose to stay in the IARSC were not random, however; they were representative of some of the movement's largest churches and were led by some of the movement's most charismatic and influential leaders (Vahle, 1993: 127).

The 'split' between the organizations that were to become the International Centres for Spiritual Living and the United Centres for Spiritual Living was therefore a response to an authoritarian organization attempting to expand its authority by subverting democratic processes within its organizational sphere of influence and thereby a direct contradiction of the principles inherent in the Religious Science exemplar paradigm. Being very aware of this and how it runs contrary to their teachings, the Board of Trustees of the Church of Religious Science, later to become the United Centres for Spiritual Living, censored all mention of the split from the biography of Ernest Holmes written by Fenwicke Holmes after Ernest's death in 1960 (Vahle, 1993: 135-136). After the split, the Church of Religious Science and the IARSC both continued to grow and have become international in size (Braden, 1987: 302). The Centre for Spiritual Living in Saskatoon is a chartered member of the International Centres for Spiritual Living, formerly the IARSC.

CHAPTER 7: INTERVIEWS WITH PRACTITIONERS AND MINISTERS FROM SASKATOON'S CENTRE FOR SPIRITUAL LIVING

The International Centres for Spiritual Living is a fundamentally democratic, rational-legal religious institution that is based upon a disciplinary matrix paradigm (Braden, 1987: 308) which is concrete and useful enough to convert individuals on an international scale, yet ambiguous and inclusive enough to allow this institution to truly be 'open at the top' for new insights and knowledge from such areas as other religions, history, philosophy, and the sciences (Braden, 1987: 296; Holmes, 1970: 264-265). As discussed earlier, when Kuhn studied the natural sciences, he found four levels of paradigm adherence found among individual scientists within natural scientific disciplines. These levels have a close parallel with the levels of paradigm adherence found among the members of the Centre for Spiritual Living in Saskatoon.

The New Thought movement, exemplified in the International New Thought Alliance, has its parallel with the grouping of sciences known as the "natural sciences" (Preston, 2008: 38) and is exemplified by groups such as the United States National Academy of Sciences. These two paradigmatic groups are very abstract exemplars, one created/discovered by the exemplary achievement of Phineas Quimby (Braden, 1987: 4-5), in the case of New Thought, and the other created/discovered by Charles Darwin and built upon by T.H. Huxley, in the case of the natural sciences (Haught, 2006: 5; Scott, 2004: 80-81). Each individual religious grouping or organization found within the New Thought movement (such as the Religious Science movement, Divine Science, or the Church of Truth) has its parallel with the individual natural sciences (i.e. biology, biochemistry, physics, etc.). While some New Thought organizations may closely parallel the natural sciences due to a disciplinary matrix being utilized at this particular level of organization, in the case of the Religious Science movement, the

shared paradigm is an open-ended and largely unarticulated exemplar (Braden, 1987: 301-302). The ICSL acknowledges the existence of this exemplar created by Ernest and its position within it, stating in its website that "Dr. Ernest Holmes founded the spiritual movement that became Centres for Spiritual Living" (ICSL website). This reference to all Centres for Spiritual Living instead of just the ICSL was specifically meant to reference all the differing exemplars and disciplinary matrixes that exist within Ernest's exemplar, which is often referenced as the Religious Science movement.

The Religious Science movement also parallels the natural sciences in that it has sub-disciplinary groups such as the three distinct types of religious institutions found within the Religious Science movement; the United Centres for Spiritual Living, the International Centres for Spiritual Living, and the sectarian Religious Science groups that chose not to join with either organizational grouping after the split of 1954 (Braden, 1987: 301-302; Vahle, 1993: 130). These groupings are very similar to the sub-disciplinary groups that Kuhn identifies within natural scientific disciplines (such as crystallography biochemists, solid-state physicists, or radio astronomers). Sub-disciplines within the natural sciences typically follow the trend of adhering to their discipline's disciplinary matrix while also utilizing an exemplar, which differentiates them into a particular sub-discipline that is similar and yet distinct from the discipline as a whole (Preston, 2008: 39).

Religious Science sub-disciplines, however, are structured in a different manner from those of the natural sciences. The coherency of the Religious Science movement, into which the International, United, and independent churches belong, is an exemplar created by Ernest Holmes and is recognizable by way of their usage of his teachings as

outlined in his book "The Science of Mind," as well as the class structuring, general practices, the use of Religious Science literature, the occasional shift of a church from one organization to the other, and the occasional exchange of pulpits among ministers of the United and International organizations (Braden, 1987: 301-302). It is the sub-disciplinary groups such as the International, United, and independent churches, that are representative of disciplinary matrix paradigms, which represent "the entire constellation of beliefs, values, techniques and so on shared by the members of a given...community'" (Preston, 2008: 23); it is possible, however, that some of the independent churches may utilize exemplar paradigm(s) instead of a well-articulated disciplinary matrix.

While it has been stated that there is little to no ideological difference between the International and United institutions (Braden, 1987: 302), there remains a significant difference in how they are organized, how their practices are governed, the values that are emphasized in their organizational practices, and the types of authority utilized in each institution. In other words, while both institutions utilize the Religious Science exemplar, which would represent their shared ideology - there are two very distinct disciplinary matrixes utilized by the International and the United institutions that are partially represented in how they formally organize within their respective institutions. These distinctions are even more prominent and easily identified when comparing the independent Religious Science churches to these much larger institutional structures of the International and the United Centres for Spiritual Living as well. Braden explains how the differences between these groups "seems to be a purely organizational matter

and the primary difference is in the degree of central or authoritarian control each is willing to take" (Braden, 1987: 302).

According to Kuhn, the final level of paradigmatic cohesiveness in the natural sciences, is found at the level of a community of roughly one-hundred members (Preston, 2008: 38). This model closely parallel's Saskatoon's Centre for Spiritual Living since their estimated membership number is just under a hundred (interviewee 2A). It is to this smallest and final level of intra-paradigm recognition that this chapter addresses itself. Like the natural sciences, where communities of scientists utilize one another for citation purposes in order to build theories and modes of research from referencing one another, so too does the Centre for Spiritual Living in Saskatoon build its own unique understandings from its own particular organizational practices, the interpretation by its ministers and practitioners of the International Centre's teachings, and the individual member's unique attempts to combine and relate their own understandings to the community as a whole, the economic circumstances of each individual Centre, and the religious and secular communities, legislation, and governments that the members of each Centre must engage with.

The differentiations between Centres in terms of their community-level paradigms, caused by authoritative and/or charismatic interpretations of the official teachings, and the necessary interactions with other local organizations, legislation, and organizational maintenance is not revolutionary behaviour and is not contrary to the disciplinary practices, rules, and procedures adopted by the International Centres for Spiritual Living (Braden, 1987: 308). However, the inclusivity in the ICSL disciplinary matrix, coupled with the social and economic circumstances of each chapter can easily

facilitate the creation of community-level exemplars and possibly even disciplinary matrixes, which, in turn, cause a particular chapter to change to an independent or a United denomination (ibid: 302).

In order to gain a more coherent and articulated understanding of the community-level paradigmatic framework utilized by the members of the Centre for Spiritual Living in Saskatoon, interviews were conducted with the available ministers, practitioners, and practitioners-in-training. Together these seven individuals are amongst the most experienced with the organizational practices of the Centre, and among the most knowledgeable concerning the official teachings of the Centre and their accepted interpretations due to their having taken and successfully completed the majority of classes offered at the Centre in Saskatoon.

The main congregation of the Centre for Spiritual Living in Saskatoon is unlikely to possess conceptual knowledge of any of the paradigmatic levels other than the exemplar(s) utilized at the level of their own community. This is due to how the disciplinary matrix utilized by the International Centres for Spiritual Living (ICSL) does not directly affect the average individual members unless, as a community, they adamantly dislike what they are being taught at the Centre and seek to separate from the ICSL's authority or seek to remove a pastor from their authoritative role (Interview with participant 1A).

There are many reasons for this lack of interaction with the disciplinary matrix of the International Centre's organization. The autonomy of each chapter regarding ownership of property and administrative rights, the largely unarticulated Religious Science exemplar/movement, the inclusive tradition of the movement as a whole, and

Ernest Holmes' reluctance to establish criteria by which additions, rejections, and/or reinterpretations of his Religious Science paradigm could be accepted or rejected (Braden, 1987: 308; Vahle, 1993: 104). According to one interviewee, "[the ICSL]'s a licensing body, that's basically what they are to us. It's not like they're a parent organization even...every church is autonomous" (interviewee 4D).

Because these factors prevent definitive interactions with, and thereby knowledge of, the disciplinary matrix of the ICSL, it is only by adopting a particular institutionalized role within the Centre that members come into direct contact and gain accurate knowledge of that particular paradigmatic framework. Without the necessity of obtaining the credentials required to obtain those institutionalized roles, there would be no reason even to possess an awareness of the disciplinary matrix that the Saskatoon Centre utilizes as a chartered member of the ICSL. The two ways of accomplishing this task for regular members is either by being elected to the local board of governors or by taking classes, which eventually accredit a person to become practitioners and ministers. There are unofficial roles that can be adopted by members of the Centre but these do not require accreditation or election and therefore wouldn't require any knowledge of the ICSL's disciplinary matrix. These are volunteer positions such as managing the book-desk/book sale area of the Centre or being a greeter during Sunday gatherings.

This likely inability to describe or differentiate the paradigms utilized by the Centre, coupled with the Centre's present tendency to attract converts who are often representative of vulnerable populations, led this researcher to limit the interviews done in this study to those who would be the least threatened or possibly harmed by an

interview concerning the Centre's paradigmatic frameworks and organizational

practices, as well as being the most qualified to answer them. The interviews

conducted supported these initial assumptions made by the researcher.

While there are four distinct paradigmatic frameworks utilized by the Centre in

Saskatoon, the regular members have no pressures placed upon them to have an

awareness of the ones beyond the community exemplar created and maintained by the

individuals in positions characterized by rational-legal authority at the Centre. As the

interviewee 1A explained, "for regular members...they can pretty much believe what

they want and do what they want." The amazing inclusiveness of the ICSL paradigm

has the result that, regarding individual members of the Centre who have not obtained

official roles such as board member, practitioner, and/or minister, there is an amazing

amount of subjectivity and diversity regarding how the Centre's teachings are

interpreted and utilized. Interviewee 4D explained how differing interpretations and

subjective use of the Centre's teachings are actively encouraged, stating that "we

celebrate individuality...We don't all think the same; heaven forbid. And we don't all

practice it the same way either...whatever appeals to you."

These very individualistic statements made by the interviewees, while possibly

leading to communal-level paradigmatic formation(s), are not, in and of themselves

indicative of a communal-level paradigmatic framework. The ICSL actively encourages

its members to interpret their teachings in whatever manner makes the most sense to

them, stating that,

> At International Centres for Spiritual Living we teach that each individual
> has influence over, and responsibility for, his or her own life. We support
> personal responsibility and strongly discourage the 'following of' any one

person, including founder Ernest Holmes. The philosophy taught by International Centres for Spiritual Living challenges people to think for themselves and believe only what feels true to them (ICSL website).

However, despite this very inclusive disciplinary matrix adopted by the ICSL, there is definitely a communal-level exemplar existing at the Saskatoon Centre that is recognizable due to how it can be differentiated from, and contain elements that are incompatible with, many of the official principles of the ICSL. This communal-level paradigm can be referenced by several discrepancies - the first is the recognition of legitimate authority at Saskatoon's Centre, the second is the issue of theistic belief at Saskatoon's Centre, the third involves the interaction of science, religion, and Science of Mind understandings, and the fourth involves how to utilize treatments and what to expect from them.

The first discrepancy between the ICSL's and the Saskatoon Centre's paradigmatic framework is the recognition of who possesses legitimate authority and how it is utilized to teach classes, conduct celebrations, and contribute to the knowledge-base of the Centre. The institutional framework utilized by both the International Centres for Spiritual Living and the Saskatoon Centre for Spiritual Living, while requiring individual loyalty if any institutional roles are adopted and possessing many rules and procedures that allow for democratic, rational-legal authority to be maintained, does not greatly affect the experiences or beliefs of the individual congregants at the Centre. The reason as to why the issue of legitimate authority within Saskatoon's Centre would not come into play unless an individual had obtained an accredited role within the scope of the ICSL's disciplinary matrix lies in the authority-free social sphere that is created by the ICSL's paradigmatic requirement that its members

are challenged "to think for themselves and believe only what feels true to them" (ICSL website).

Interviewees 1A and 3C both made specific mention that loyalty to the pastor or spiritual director of the Centre at Saskatoon is a necessary requirement of having a practitioner's license and being a minister at the Centre as a consequence of how the pastor holds the authority to revoke their licenses under their pastoral license granted to them by the ICSL. This authority held by the pastor remains rational-legal in its scope, however, due to democratic procedures that can be utilized by a congregation to remove a pastor from office (interviewee 1A and 3C). Interviewee 3C explains the pastor's role at the Centre as being "the ecclesiastical authority in the Centre...the responsibility of staff ministers are to assist him/her in carrying out ecclesiastical responsibilities in whatever way they work out."

Despite this clear understanding among the members who have obtained accredited roles within the Centre of an authoritative hierarchy, there was also universal agreement among the interviewees that one's personal loyalty need not be given to anyone or anything as a requirement of being a member of the Centre or in utilizing the Centre's paradigmatic teachings. Membership at the Centre in Saskatoon does not entail any specific responsibilities. Interviewee 2A explains, "there are no expectations laid upon [our members]...We don't expect anything from our people. We provide opportunities for them to step up and help the family out...Everything that happens at the Centre is done by volunteers and it's because they want to do it." The social cohesion of Saskatoon's Centre appears to be based upon acceptance, support, and a

sense of community; many of the interviewees mentioned that the Centre is simply a grouping of like-minded thinkers (Interviewees 1A, 4D, 5B, 7B).

The classes that the Centre offers are designed to eventually educate practitioners and ministers who will adopt roles within the rational-legal organizational structure of the institution. It is therefore understandable as to why all of the interviewed practitioners-in-training who do not have as much experience within accredited institutional roles would think that they do not need to be loyal to either the teachings, or the roles held by authoritative individuals at the Centre. The ICSL's disciplinary matrix does not become well known to individual members of the Centre until they have taken many or most of the courses that the Centre offers. Until this time, only the Religious Science exemplar/movement and the communal exemplar would be understood to exist by the majority of the members of Saskatoon's Centre.

The second discrepancy that exists between the ICSL and Saskatoon's Centre is the latter's conception of theistic belief and its necessity to understanding and utilizing these paradigmatic teachings. The ICSL official website describes its disciplinary matrix as being a definitively theistic one where they "teach people how to have a personal relationship with God" (ICSL website). This is largely mirrored by the responses of the interviewees, four of whom agreed that there are aspects of their teachings that cannot change (interviewees 1A, 3C, 2A, 6B); three of those four specifically referenced God in their answer as paradigmatically structuring their knowledge (interviewees 1A, 3C, 2A). This matches with the expectations of the class and ministerial training, as interviewee 4D explained,

I would pretty much say that by the time you're licensed as a minister, what you believe is pretty in line with the teachings [of the ICSL] I would think. I think that the practices of how it's done is where the variance would be, the variety but the operation of Love and Law [synonyms of God] would be pretty basic I think to us all (Interviewee 4D).

For the members of the Centre that do not occupy accredited roles (i.e. board member, practitioner-in-training, practitioner, minister, or pastor), however, there is a much more inclusive and ambiguous social sphere that is built into the communal paradigm utilized at Saskatoon's Centre. All of the interviewees at the Saskatoon's Centre denied that theism was a necessary prerequisite for utilizing the Centre's teachings and being a member of the Centre in Saskatoon. Interviewee 1A elaborated stating that, "I maintain that the principles of mind that we teach are not one-hundred percent dependent on the belief in a supreme being, although they're founded on that." According to the communal paradigm, atheists can interpret and utilize the Centre's teachings without utilizing a belief in God whatsoever.

A third discrepancy exists in the Saskatoon Centre's communal paradigm in reference to the relationship between religion, science, and Science of Mind. On the ICSL's website, it is claimed that "in Science of Mind, we believe that the fields of religion and science are complementary, and that science will prove what the mystics have said for thousands of years about the nature of God, human beings, and the Universe...[it] is also scientific in that it uses laws of nature to prove or explain spiritual principles." Along with these points, the ICSL also necessitates, not only that religion and science are complementary, but also that both are compatible with Science of Mind. Again, on the ICSL website it states that "Science of Mind is a philosophy that integrates spiritual truths with science and physics" (ICSL website).

Due to how the sciences presently do not and cannot accept the ontological primacy of experience, it is necessary to create and maintain authoritative interpretations of scientific, religious, and Science of Mind intersections to adopt these goals of the ICSL disciplinary matrix. Each Centre would need support from people in positions of authority to determine when the sciences have proven or explained the spiritual principles recognized in Science of Mind teachings and how to integrate them with other sciences, especially physics. As already discussed, Ernest never established criteria for adding or discarding paradigmatic information concerning religion, science, and Science of Mind. The ambiguity concerning how to change the teachings in accordance with scientific discoveries, coupled with the mandate to integrate religious and scientific knowledge together utilizing Science of Mind teachings necessitates authoritative interpretation at one of the four paradigmatic levels to avoid institutional or even communal relativism in the teachings.

In Saskatoon's Centre there was universal agreement among all interviewees that facts, truths, proofs, and demonstrations of treatments are all subjectively defined. Interviewee 3C elaborates, "as far as I know, individuals get to decide for themselves pretty much what facts they will accept...because we don't have a hierarchy, there's no hierarchy that says 'these facts are acceptable and those are not.'" Even in terms of Ernest's teachings in his book "Science of Mind," the Centre's communal paradigmatic interpretation states that his own usage of proof is entirely subjective based upon what he had seen and experienced (Interviewee 2A). Therefore, in terms of the communal paradigm there is an ontological inability to integrate comprehensively scientific

knowledge and discoveries with Science of Mind; the communal exemplar is incompatible with the mandates of the ICSL disciplinary matrix.

Instead of integration *per se*, what the communal exemplar necessitates is instead the occasional use of scientific and other religious ideas to support what is presently taught within the Saskatoon Centre's communal framework. Interviewees 1A and 4D illustrated this point by stating that "we're not teaching quantum mechanics. We're using it to explain what we mean" and that "we'd just use what was applicable...you'd probably say we agree with quantum physics up to a point and then...you're free to agree or disagree yourself." There is presently no attempt to officially integrate scientific and other religious information into Science of Mind teachings at the Saskatoon Centre. Instead you find individual attempts made by scientifically minded people to utilize scientific discoveries and understandings to illustrate Science of Mind interpretations of reality.

Many of the accredited members of Saskatoon's Centre interviewed do not agree that the fields of religion and science are complementary; quite the opposite in fact. Only two interviewees, 1A and 2A, described their own understanding of science and religion in a complementary manner and they both utilized differing explanations to do so. Instead of adopting the paradigmatic framework of the ICSL where religion and science are complementary, interviewee 3C explained that "it's a question of looking for commonality, what's the commonality here?...we wouldn't talk about the differences because we wouldn't see any point in doing that."

The interviewees at Saskatoon's Centre were also, for the most part, ignorant of scientific disciplines, their worldviews, and recent findings of scientific activity.

Interviewee 3C explained how, regarding the Saskatoon Centre's membership, "some people are more scientifically inclined and others know almost nothing about science at all..." Given how there was a universal agreement among the interviewees that Science of Mind is fundamentally different from all the other sciences, and that no one mentioned that the classes and subjects taught at the Centre were to learn about the sciences when asked about them, it is a reasonable assumption that any members of the Centre that possess knowledge of science and scientific activity have gained that knowledge independently of the Centre and its teachings. Therefore there appears to be no organizational framework at Saskatoon's Centre for teaching the interrelationship between science, religion, and Science of Mind. This observation is verified by one of the interviewees who stated that "we are not involved in the pursuit of science as such, we basically utilize principles of science in our teaching where useful but we're not deeply involved in scientific research" (Interviewee 1A). This situation is specific to Saskatoon's Centre, and is therefore indicative of their own communal paradigm, which contrast with other Centre's that have traditionally had classes that educated their members on comparative religions and other social sciences (Holmes, 1970: 264-265; Vahle, 1993: 296).

This paradigmatic incompatibility between the Saskatoon Centre's exemplar and the ICSL's disciplinary matrix regarding the interrelation of science, religion, and Science of Mind is based upon several factors including - financial costs, resource allocation, and other paradigmatic incompatibilities. Interviewee 3C explains this paradigmatic incompatibility by referencing financial costs and a rejection of the necessity of merging science with Science of Mind, stating that it " hasn't been done for

two reasons: one is the financial costs, and secondly, because [the Centre] doesn't feel

any need to do so. We don't have to prove to the world that we're right." Another

interviewee, 1A, explains the incompatibility by referencing the necessity of resource

allocation; "we're not into scientific research. We leave that for others. We're into

enabling personal transformation and that's what we focus on." 1A even went further to

describe a practical inability to relate the sciences with Science of Mind;

> I know very well that the outcome of prayer is not something that is going to be subject to third-party verification...nobody can duplicate that experiment from me. They can duplicate it for themselves and so they can independently confirm that the process worked but they can't confirm the outcome and so in normal scientific pursuit you can confirm the outcome...prayer is not going to give a duplicate, measurable result between two different people doing that (interviewee 1A).

> The trouble is...science normally requires an element of scepticism. That's counter to faith. So now if I'm measuring something with proper scientific scepticism, am I working to counter the result?...Probably I am...That's why we encourage people to try it and practice it for themselves because there's nothing, there's nothing in my experience that could convince you it works. It's not transferrable in that sense (interviewee 1A).

Given the lack of hierarchical control (interviewee 3C), the lack of procedures for

accepting or rejecting aspects of Ernest's teachings (Vahle, 1993: 104), and the ICSL

mandate to attempt to integrate religion, science, and Science of Mind teachings

together (ICSL website); the communal level paradigm at Saskatoon's Centre has

interpreted Ernest's teachings on science and scientific activity as being relative to each

individual. As a community, however, if scientific or religious teachings are integrated

into the communal paradigm, it is partially due to the work of the pastor(s) that inevitably

monitor and either accept or reject these integrations. Whether or not a Centre's

paradigmatic teaching will be modified is therefore a question as to whether or not the

pastor is accepting of the external influences that members, practitioners, and ministers might bring to the Centre. Interviewee 4D explained how, when going to other Centres, "you can pick out an ex-Baptist minister or somebody who's into Sufism or like a Buddhist...there's definitely influence like that" and that the communal paradigm "depends on what kind of person [the pastor is], if they're a real people-person, you're gonna have a way different, if they're theatrical, you're gonna have a way different kinda service that happens."

The fourth and final paradigmatic discrepancy that exists between the Saskatoon Centre and both the ICSL disciplinary matrix, as well as the Religious Science exemplar/movement, is the expectations of treatment. As explained earlier, Ernest was insistent on the importance of getting results that could be checked by a physician (Vahle, 1993: 17). This act of getting demonstrations that could be empirically verified by the sciences was one of the ways by which Science of Mind could integrate both religious and scientific understandings. Given how the ICSL insists that this can and should still occur, one must assume that the methods would be similar to those laid out by Ernest.

Such a situation, however, is not representative of how demonstrations of treatment are understood at the Saskatoon Centre. There is an incompatibility with principles adopted by Ernest and the ICSL in two ways. The first incompatibility lies with the entirely subjective identification of demonstrations concerning treatments. As mentioned already, in the Saskatoon Centre's paradigmatic framework, facts, truth, proofs, and demonstrations are all entirely subjective and can legitimately be

156

considered demonstrations even when no one else has observed a demonstration of treatment; all the interviewees agreed on these two points.

The second incompatibility is due to how practitioners are presently taught to do treatments and understand demonstrations. Ernest specifically warned against performing abstract treatments without a definite motive in mind stating that they "will never produce an active demonstration" (Vahle, 1993: 38-39). By the term 'active' demonstration, Ernest was referencing demonstrations that could be checked by a physician. Abstract treatments are now utilized by accredited members of Saskatoon's Centre and judgement of those abstract treatments, which are often not intended to obtain specific results, cannot be determined as demonstrations by anyone other than the person receiving treatment, and sometimes even they cannot judge the outcome. Interviewee 6B explains,

> When we do our treatments, we basically say that we treat for the highest possible good of someone…sometimes it'll be a specific thing. But a lot of times it'll just be general, the highest, the best for this person…if you just went into a treatment and you said…you know what, I treat that this person becomes perfectly healthy. But then again that's you interpretation, perfectly healthy to the Law might be yeah, in a different form, right, than what we see (Interviewee 6B).

These four discrepancies - (authority, theistic belief, interrelationship of religion, science, and Science of Mind, and treatment), between the paradigmatic framework utilized by the accredited members of Saskatoon's Centre and the ICSL's disciplinary matrix are indicative of a communal-level exemplar. This exemplar places much more emphasis on the ontological primacy of experience than both the Religious Science exemplar and the ICSL's disciplinary matrix. The members of Saskatoon's Centre are actively encouraged to not restrict their understandings to any particular source and to

only believe what they feel is true for them. This anti-authoritarian and anti-authoritative social sphere would be actively maintained by the hierarchical structuring of Saskatoon's Centre, those with accredited roles, the pastor, and the community of members as well.

CHAPTER 8: CONCLUSION

The research question asked at the beginning of this study was "what historical social circumstance(s), institutional mechanism(s), and paradigmatic framework(s) allow certain religious organizations to teach and utilize both scientific and religious understandings without interpretations of conflict becoming a contentious issue?" There appear to have been several reasons as to why this specific religious institution is able to utilize alternative scientific and religious understandings in conjunction with their teachings at this time. The first reason is due to the origins and history of the New Thought exemplar. The second appears to be due to the split the occurred in the Religious Science movement back in 1954 and the present-day incarnation of the ICSL disciplinary matrix. The third and final reason has to do with the present communal-level exemplar utilized by Saskatoon's Centre for Spiritual Living. This communal-level exemplar is also greatly influenced by the present accredited members who both lead and teach the differing levels of paradigms adhered to by their organization and who also maintain the anti-authoritarian social sphere within their organization. It is these factors coupled with its present social circumstances, size, and the financial situation of

Saskatoon's Centre that has led to this particular institution being able to utilize alternative scientific and religious understandings with their Science of Mind teachings.

As explained in the literature review chapter, the iconic examples of conflicting interpretations of scientific and religious practice do not represent typical relationships among two belief systems as commonly portrayed. There is no necessary reason as to why scientific and religious understandings must be in conflict. The very terms "science" and "religion" are themselves so inclusive with no definitive boundaries that to attempt any definition entails either a clear and concise definition that is ideologically and methodologically useful but which inevitably fails to take into account many of the accepted criteria of what scientific and religious belief and activity entails, or the definition is so abstract as to be ideologically and methodologically useless. As discussed earlier, disciplines, groups, communities, or institutions that are recognized as being scientific or religious need not have anything in common (Harrison, 2006: 147; Shapin, 2007: 12).

Consequently, the terms science and religion were not defined for the purposes of this study. Instead a Kuhnian and Weberian paradigmatic framework, which is partially based upon Ludwig Wittgenstein's concept of "family resemblances," was utilized to take into account the myriad of ideological and methodological frameworks that both individuals and groups adhere to within scientific and religious groupings, communities, and institutions. This epistemological framework is able to categorize the ideas, beliefs, values, and practices that differing organizations identified as being either scientific or religious adhere to at any given time by way of careful analysis of their ideas, teachings, dogmas, and practices.

According to both Kuhn's epistemology and Weber's typology of legitimate authority, inclusive paradigms that people adhere to can become well articulated into paradigm-theories that are well defined and can be rationally compared and contrasted with other paradigmatic frameworks due to differing social circumstances, the most influential of these for the interpretation of conflict between paradigmatic frameworks appears to be the authoritative perception of threat, both internal and external to the paradigmatic following. This identification of a threat and the subsequent defensive posturing taken by paradigm adherents can be the result of explicit attacks made by other individuals or social groups, real or imagined, and must be acknowledged by individuals holding legitimate authoritative positions within the paradigmatic social structure. For example, the fundamentalist Christian Science organization was founded by a charismatic leader who always perceived herself and her organization as being under attack, and many of these attacks were only perceived by her and were unverifiable in nature (Schoepflin, 2003: 9, 27, 31, 76-77, 88). Ernest Holmes, on the other hand, while founding and maintaining absolute authority over the Religious Science movement, never perceived himself or his organization as being under threat (Holmes, 1970: 210) and by the time that he began to perceive the movement as being under threat, the IARSC was already outside of his authoritative sphere of influence (Vahle, 1993: 121-127). Other social circumstances also had an effect upon the Religious Science exemplar and the religious organizations that followed.

Paradigm articulation/routinization can be the result of political regimes, economic circumstances, bureaucratic organization, and the size of the paradigmatic following (Preston, 2008: 37; Ruthven, 2007: 11; Weber, 1947: 370; Wuthnow, 1994:

71). As Ernest explained, the political, medical, religious, and legal regimes in the

United States were much more accommodating as his religious organization was

developing and he was not required to make a lot of compromises with these other

social institutions like Mrs. Eddy and the Christian Scientists were (Holmes, 1970: 210;

Schoepflin, 2003: 190). Part of this was due to how Ernest had created a much more

ambiguous and inclusive paradigmatic framework than Mrs. Eddy, but it also had much

to do with the attacks upon Christian Scientists. Schoepflin explains,

> the American medical community's successful efforts to unify medicine
> under its banner of science pressured Christian Scientists to abandon
> much of their medical identity (Schoepflin, 2003: 7).

> Possibly more than any other public events, the court trails of Progressive
> Era practitioners influenced the evolution of Christian Science and
> hastened the shift from its medical roots to its religious foundations and
> from a nonconformist to an accommodationist attitude. Christian
> Scientists had adapted their therapeutic system to the demands of the
> state while retaining their right to believe and practice their religion (ibid:
> 190).

Well-articulated paradigm-theories are not necessary, and may not even be

welcome or appropriate for paradigm adherents. Kuhn explains how unarticulated

exemplars need not even be well articulated enough to be reducible to rules or definite

procedures, but can still guide scientific research. He explains how,

> Scientists can...agree on their identification of a paradigm without
> agreeing on, or even attempting to produce a full interpretation or
> rationalization of it. Lack of a standard interpretation or of an agreed
> reduction to rules will not prevent a paradigm from guiding
> research...Indeed, the existence of a paradigm need not even imply that
> any full set of rules exists (Kuhn, 1970: 44).

In order to rationally and logically compare and contrast different paradigms, it is

first necessary to have well-articulated paradigms to relate to each other. Even so, the

requisite amount of paradigm articulation that actually allows for paradigm-theories to be compared and contrasted with one another still only makes logical sense if other criteria are met as well such as a common language, rationality, metaphysical assumptions, and/or level of analysis. It is these criteria that must be met in order to overcome what Kuhn refers to as the incompleteness of logical contact between paradigmatic frameworks.

Saskatoon's Centre for Spiritual Living manages to overcome this problematic area, not by reinterpreting other paradigmatic forms of understanding into their own but by rejecting the very idea of apodictically certain knowledge concerning reality, recognizing their own paradigmatic framework as only potentially useful or true if individuals find it to be so, and continually being open to alternative ideas that may assist them on their spiritual journey. Interviewee 2A elaborates,

> God is infinite, it is so big that...no one has the wrong idea, we're all on the journey to get to that end place where we understand what God is, how I'm related to it...Do we have the only way that you can get there? No, but it's a way that works for me, but if you ask a Buddhist, they'll say their way works for them. So each and every person is on a spiritual journey whether they realize it or not (Interviewee 2A).

The reason as to why the Saskatoon Centre for Spiritual Living is able to utilize such an abstract and unarticulated paradigmatic framework is, in large part, due to the history of the Religious Science movement. This religious healing movement never had any particular need to take defensive posturing during its original creation or development due to the social niche that was created for it and other religious healing movements and institutions by the first New Thought healers such as Phineas Parkhurst Quimby and Warren Felt Evans. Also, the founding and early growth of other religious

healing movements, like the Christian Science movement, were rife with court cases,

legislative petitioning, and public condemnation against such movements by other

religious, political, and medical establishments. It was these early movements and

institutions that took the brunt of the social attacks by these establishments and laid the

legal, political, and social groundwork for other such movements to develop unhindered.

The Religious Science movement, being one of the last New Thought movements to

develop, had little to fear from external attacks and, more importantly, its founder and

charismatic leader, Ernest Holmes, interpreted the attacks upon Christian Scientists and

related religious healing movements as being over (Holmes, 1970: 210).

Another major influence upon the development of the paradigmatic framework

utilized by the Saskatoon Centre for Spiritual Living was the split that occurred in the

Religious Science movement in 1954. It was this event that inspired members of the

International Association of Religious Science Churches (IARSC), later to become the

International Centres for Spiritual Living (ICSL), to ensure that the ICSL's disciplinary

matrix would remain largely unarticulated, maintain its ontological primacy of

experience, be democratic in organization, and free from all institutional dogmatic

beliefs. This split occurred due to attempts by Ernest Holmes' and the Institute board to

enforce 'the plan' onto the members of the IARSC. This was objectionable because

there were no democratic safeguards in the plan and Ernest was acting in a

contradictory manner to his own teachings of how the Religious Science movement

should be 'open at the top' for new insights and knowledge and concerning how

everyone in the movement should be able to contribute to the movement as a whole.

He was also attempting to act outside of his designated sphere of legitimate authority;

however, as already explained, his charismatic authority still held much sway over the members of the IARSC. Given how the ICSL broke away from the control of Ernest and the Institute due to the perceived importance of these factors, it is easy to recognize why they are so highly valued presently.

The social significance of this split and the freeing of the ICSL from the charismatic, traditional, and rational-legal forms of authoritarian control held by Ernest and the Board of Governors in the Church of Religious Science (later to become the United Centres for Spiritual Living) is again, best exemplified utilizing the similar developmental strategies that Mrs. Eddy employed with the Christian Science religion. In both Christian Science and Religious Science, the two charismatic founders and leaders both refused to give up their charismatic authority (Schoeflin, 2003: 92, 191-192; Vahle, 1993: 119, 121). Both of these exemplar's underwent monumental splits in their movements due to disagreements about how to organize into a disciplinary matrix setting. In Christian Science, there was the "Corner schism" and in Religious Science, there was the "split" that occurred in reaction to "the plan" (Schoeflin, 2003: 88, 101; Vahle, 1993: 117-127).

In the case of Christian Science after the Corner schism, Mrs. Eddy moved to consolidate her charismatic authority by defining "orthodox" Christian Science, dismantling all Christian Science organizations that she did not control, and establishing large organizations that all orthodox followers would have to join (Scholeflin, 2003: 106-108). Mrs. Eddy even ordained the Bible and her text, Science and Health, as church pastor because "charismatic human pastors posed the potential danger of leading congregations away from Eddy and orthodox Science through their sermons" (ibid:

108). It was this consolidation of Mrs. Eddy's power and her continual need to strive for

the security of what she thought of as her organization and her role within it that has led

to Christian Science becoming one of the most fundamentalist New Thought

organizations and has led to its inability to function well within the United States social

sphere (ibid: 206-209).

The ICSL, on the other hand, developed much differently in reaction to attempts

by Ernest and the Board of Governors to consolidate their power over the Religious

Science movement. It was at least partially through the adoption of Ernest's exemplar

that the members of this organization learned of the importance of it being open at the

top for new insights, knowledge, and perspectives. Ernest had also mentioned the

importance of democratic principles, individual input into the organizational beliefs and

practices, and not following authoritative people (Holmes, 1970: 185; Vahle, 1993: 5,

62, 90, 99). However, Ernest and the Board's actions were often contrary to these

teachings and, when 'the plan' was purposed, the members of the ICSL had had

enough and removed themselves from the authority of the then Church of Religious

Science (Vahle, 1993: 89-92, 117-127).

As a consequence of these events, the ICSL has always been a fundamentally

democratic organization (Braden, 1987: 308-309) and the people in positions of

authority are unable to subjectively define or act upon perceived threats to their power

or the ICSL organization due to the democratic safeguards that are in place. Also, the

authority possessed by the ICSL over its chapters is only marginal and is not enough to

dictate what the fundamental principles of Science of Mind teachings and practices are.

It can even be said that each community chapter of the ICSL is autonomous (Interviewee 3C), which would then facilitate the formation of communal paradigms.

The Saskatoon Centre has developed its own communal paradigm wherein the non-accredited members of the community have seemingly no restraints placed upon them in terms of their beliefs, activities, or monetary commitments, or time. The Saskatoon Centre leaders and accredited members believe that their paradigmatic framework operates well even in the context of seemingly antithetical belief-systems such as materialism and atheism. They do not find it necessary, or even desirable, for people to believe in anything that does not make sense or work well for them. In this way, all members of Saskatoon's Centre are encouraged to compare ideas, integrate different types of religious and/or scientific knowledge, and to contribute to the overall paradigmatic framework of Saskatoon's Centre and possibly even the ICSL's disciplinary matrix as well.

The Saskatoon Centre's emphasis on the ontological primacy of experience removes any problem from arguments of ontological supremacy. There was universal agreement among the interviewees that the Centre's teachings did not have a corner on reality or truth. Interviewee 1A even went as far as to state that, "I don't think there's any correct way to understand reality," thereby utterly rejecting any conception of exclusive realism. Consequently, when it comes to integrating the sciences and other religious understandings into their teachings there can always be a search for compatibility given the ambiguity and inclusiveness of the Saskatoon Centre's paradigm. Interviewee 3C explained how simple acceptance of the validity of others' positions and the absence of any ideas of ontological supremacy in their own

paradigmatic framework enables members of Saskatoon's Centre to utilize scientific knowledge and discoveries, stating that "we just start out with an acceptance of the validity of science, we don't have to argue against science."

Lastly, social circumstances, economic circumstances, and the size of Saskatoon's paradigmatic following have led to Saskatoon's Centre developing its paradigm in a very particular manner. Given its small size of roughly one-hundred members (interviewee 2A) and its consequently smaller economic income, it has not had to articulate its paradigmatic framework to develop a bureaucracy or to effectively manage its activities, thereby allowing it to presently develop with a largely unarticulated and ambiguous paradigmatic framework. Also, while the Saskatoon Centre is mandated, as a chartered member of the ICSL, to integrate scientific and other religious knowledge into its own, it has had to fulfil this mandate based upon its size, social, and economic circumstances. In large part, the reason why several of the interviewees commented that they did not think that this mandate had been fulfilled at all was due to the rarity of these events (interviewee 7B). This rarity is a consequence of several factors such as the need to maintain a coherent set of teachings despite the ambiguous paradigmatic framework utilized, the confusion that can be caused when teaching ideas that the Centre has not officially adopted, as well as the feasibility and cost of bringing other speakers in to talk. Interviewee 3C explained,

> I think part of the challenge has been, we are a small group so if we want people to understand what we are about, how can we have too many other people come in and talk about what they believe? Not because we don't agree with what they believe. But just to prevent confusing people, that's one thing. And I think that the other thing has also been financial; to keep the Centre going has at times been a great financial challenge (Interviewee 3C).

It is for these reasons that Saskatoon's Centre maintains the inclusive paradigmatic framework that it has and is presently utilized occasionally to integrate alternative religious and scientific knowledge and discoveries with Science of Mind teachings. It is the ambiguous and valued paradigmatic boundaries that allow for this type of integration to take place at this time, which is the situation due in large part to social forces external to the agreed-upon paradigmatic beliefs of the Centre. The largely unarticulated paradigmatic framework that allows the Saskatoon Centre to overcome the incompleteness of logical contact between paradigmatic boundaries is due to a logical inability to officially categorize what the Saskatoon Centre's paradigmatic boundaries are. Therefore, while factors such as metaphysical assumptions, language, and/or levels of analysis still play important parts, the largely ambiguous paradigmatic framework that they are interpreting alternative paradigmatic knowledge from does not often necessitate conclusions of incompatibility or incommensurability. It is this situation, coupled with the Saskatoon Centre's tendency to look only for points of compatibility between paradigmatic frameworks (Interviewee 3C), which enables them to utilize seemingly incompatible or incommensurable knowledge from differing paradigmatic frameworks and overcome the often problematic social conclusions of conflict between scientific and religious knowledge.

Therefore, in conclusion, there appears to be several criteria as to why the Saskatoon Centre for Spiritual Living is able to incorporate and utilize alternative scientific and religious paradigmatic knowledge without interpretations of conflict becoming a contentious issue within their organization. Two important criteria are both

the New Thought and the Religious Science exemplars, which are both ambiguous and inclusive paradigmatic frameworks. Next is the removal of much traditional and charismatic authority from their paradigmatic following and a fundamentally democratic organizational principle which removes much of the arbitrary decision-making authority from individuals in their rational-legal roles within the ICSL. There must therefore be a majority agreement among the members of the ICSL that their paradigmatic framework should be articulated more, which makes the task much harder to accomplish than if a single individual or group of individuals possess either traditional or charismatic authority within an organizational setting.

The origins of the ICSL also become very important due to the necessary emphasis made by its members on issues of democratic authority and the organizational principles that the Religious Science exemplar entails. Ernest still had a lot of charismatic authority within the Religious Science movement, so to disobey and renounce his authority would have taken knowledge of, and a strong emphasis upon many of the principles found within the New Thought and Religious Science exemplars.

The last couple of points are partially influenced by forms of legitimate authority but they are not necessarily dependent upon them. The acceptance of the ontological primacy of experience, group size, economic circumstances, and social surroundings, all greatly influence how the organization will interact with and interpret other forms of paradigmatic knowledge. Without ontological relativism or the ontological primacy of experience, the members of Saskatoon's Centre would possibly have to interpret other forms of paradigmatic knowledge that is incompatible or incommensurable with their own. Group size and the organizations economic circumstances are often related

variables, more members would often equate to more donations, and both greatly

influence the extent of paradigm articulation/routinization that needs to occur. Bigger

organizations and increasing interactions with other organizations require more

paradigm articulation in the forms of rules, procedures, standards, accounting, lawyers,

secretaries, and potentially any other forms of bureaucratic organization imaginable

(Weber, 1947: 370-371). Weber explains the routinizing effect of economic

circumstances,

> The process of routinization of charisma is in very important respects
> identical with adaptation to the conditions of economic life, since this is
> one of the principal continually-operating forces in everyday life.
> Economic conditions in this connexion play a leading role and do not
> constitute merely a dependent variable (Weber, 1947: 372).

All of these social forces and paradigmatic assumptions can greatly affect

potential interpretations of conflict as existing between scientific and religious

paradigmatic forms of knowing. All of these variables, however, are connected by two

key points – first, there must exist an exclusivist realist ontology, because

interpretations of incompatibility do not necessarily lead to interpretations of conflict.

And second, that the paradigmatic framework adopted by a fundamentalist group is well

articulated and routinized enough to rationally differentiate it from other paradigmatic

frameworks; it is extremely difficult to explain what is in conflict with a particular

worldview without being able to adequately define what that worldview is. It is these two

key points, coupled with the development of an authoritative interpretation of threats to

the paradigmatic following that enable potential interpretations of conflict and the

subsequent civil strife that is presently occurring within the United States and others countries to occur.

Saskatoon's Centre for Spiritual Living has thus far been able to avoid all of these points from existing within their organization. Saskatoon's Centre has had the good fortune to have a paradigmatic framework that emphasizes democratic governance, the ontological primacy of experience, and a mandate to individually contribute new knowledge and insights to the organization. Historically, it has had the good fortune to have these aspects of its paradigmatic framework emphasized by both its adherents when they were threatened during the split and to have developed after Christian Scientists had created a social and legal niche for them to develop relatively unhindered within. Presently, this organization is able to maintain its largely unarticulated and ambiguous paradigmatic framework due to its relatively small size, economic circumstances, and the overarching national, provincial, and communal social situation that it finds itself within. Since it is has a relatively small community of members, it does not require a large bureaucracy to organize it, and it is not presently under any threat from either external or internal social forces.

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